

Section 219
Environmental Infrastructure Investigation

Inflow/Infiltration and Sewer System Evaluation Study

Epping, New Hampshire

October 1996



**US Army Corps
of Engineers**
New England Division



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October 2, 1996

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Attention: Mr. Joseph L. Ignazio, Director of Planning

Subject: Contract DACA33-94-D-0011
Final Report
Section 219 Environmental Infrastructure Investigation
Inflow/Infiltration and Sewer System Evaluation Study, Epping, New
Hampshire

Dear Mr. Ignazio:

We are pleased to submit to you this final inflow and infiltration report completed for the Town of Epping, New Hampshire. This report presents our findings and conclusions on the existing condition of the Town's sewer collection system.

As discussed in the report, we have made several recommendations for repairing specific sewer segments in the collection system. By implementing these recommendations, we believe the Town will not only reduce the amount of extraneous wastewater flows into the system, but will also reduce the capital and O&M costs of the wastewater treatment plant upgrade anticipated by the Town.

Please note that in the correspondence section of this report we have provided a written response to the comments raised by your staff on the draft report. Also, we have delivered to the Town the original videotapes of the collection system taken during this study as well as two copies of the report and appendices.

We would like to express our appreciation for the cooperation we received from the New England Division of the Corps of Engineers, particularly Mr. Matthew Walsh, and from representatives of Epping, especially Mr. David Barker and Mr. Norman Dionne. In addition, we would like to acknowledge the help of Utility Pipeline Services, Inc., who completed all of the field testing needed to make this project successful.

Mr. Joseph L. Ignazio, Director of Planning

October 2, 1996

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Thank you for this opportunity to work with the Corps of Engineers and the Town of Epping on this important project. We look forward to working with you and your staff again in the future.

Very truly yours,

SVERDRUP CIVIL, INC.



Brian M. Donahoe
Senior Project Manager

BMD:pvs

Enclosures

c: James A. Pappas, SvC, w/o enclosure
David Barker, Town Administrator, w/ 2 enclosures

SECTION 219
ENVIRONMENTAL INFRASTRUCTURE INVESTIGATION

INFLOW/INFILTRATION AND SEWER SYSTEM EVALUATION STUDY
EPPING, NEW HAMPSHIRE

Prepared by
Sverdrup Civil, Inc.

October 1996

**SECTION 219 ENVIRONMENTAL INFRASTRUCTURE INVESTIGATION
INFLOW/INFILTRATION AND SEWER SYSTEM EVALUATION STUDY
EPPING, NEW HAMPSHIRE**

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I. INTRODUCTION

The Water Resources Development Act of 1992 (P.L. 102-580, Section 219) authorized the U.S. Army Corps of Engineers to complete an environmental infrastructure investigation for the Town of Epping, New Hampshire. The Town is located in Rockingham County in southeastern New Hampshire. A copy of a map reproduced from a previous study is contained in Appendix A to show the county and town limits.

The Town is responsible for the operation and maintenance of all sanitary sewers and wastewater treatment facilities in Epping. The Town has observed that wet weather flow increases dramatically over dry weather flows, and town officials believe this increase is caused by substantial infiltration and/or inflow. The purpose of this investigation was to evaluate the existing condition of the Town's sewer collection system and to estimate the amount of inflow and infiltration into the system. Field data was collected and reviewed for this purpose. In addition, past reports on the collection system were reviewed for information about the age, joint type, depth of existing sewers, rainfall, and groundwater and soil conditions of the service area. Based on the results of the field investigations, estimated costs for the removal or rehabilitation of the major sources of inflow and infiltration were prepared, and recommendations for prioritizing the repair or rehabilitation of defects found in the collection system were developed.

Section II of this report discusses project background, outlines the study's purpose and scope, and describes the existing sewer collection system. Sections III through IX of this report discuss the results of the field testing efforts undertaken for this project. Section X presents recommended rehabilitation alternatives for repairing sources of infiltration found during the field work and provides planning level cost estimates for these repairs. Section XI provides the conclusions reached through an analysis of data and offers recommendations for removing excessive amounts of infiltration and inflow. A reference section lists those previous reports and other guidance documents that were used to assist in selecting test methods and areas for investigation. The correspondence section contains written comments raised during review of the draft report by the New England Division of the Army Corps of Engineers and the Town of Epping. Each comment has been addressed as noted in the response letter contained in the correspondence section. Copies of field work records for work completed under this study are included in Appendices A-F.

II. PROJECT BACKGROUND AND EXISTING WASTEWATER COLLECTION AND TREATMENT FACILITIES

A. Project Background

All sewer collection systems experience some degree of infiltration or inflow. Infiltration and inflow are commonly referred together as I/I. I/I can be considered water discharged into a sewer collection system that does not consist of sanitary wastewater. Infiltration may be defined as the water entering a sewer system from the ground through such means as, but not limited to, defective pipes, pipe joints, connections or manhole walls. Infiltration does not include and is distinguished from inflow. Inflow may be defined as water entering a sewer system from such sources as, but not limited to, roof leaders, cellar drains, yard and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections from storm sewers and combined sewers, catch basins, storm waters, surface runoff, street wash waters or drainage. It does not include and is distinguished from infiltration.

I/I can reduce the ability of sewer systems and treatment facilities to handle domestic and industrial wastewater. Health hazards and increases in water pollution can occur if the wastewater bypasses the treatment facility or overflows the sewer system because of overloads due to I/I. Treatment of I/I at a wastewater treatment facility increases the capital and operation and maintenance costs of the facility. Elimination of I/I via sewer system rehabilitation can often substantially reduce the cost of wastewater collection and treatment. To evaluate the economic benefits attainable via sewer system rehabilitation, a logical and systematic evaluation of the sewer system is necessary to define the I/I conditions.

The purpose of an inflow/infiltration and sewer system evaluation study is threefold: first, to isolate sources of I/I, second, to determine each source's flow contribution, and third to recommend a cost-effective program for the elimination of excessive I/I. Excessive infiltration and inflow is that quantity of extraneous water entering the sanitary sewer system that is less expensive to remove by corrective action than to transport and treat.

Several previous studies completed on the sewer collection system for the Town of Epping were reviewed for this project to provide general background information concerning the description of the study area, collection and treatment facilities, topography, soils, other subsurface conditions, climate, and historic precipitation. A list of these previous reports is contained in the References section of this report.

B. Purpose and Scope

The purpose of this investigation was to evaluate the existing condition of the Town's sewer collection system and to estimate the combined amount of inflow and infiltration into the system. The analysis was performed to make use of as much existing data as possible.

Due to the limited size and relatively young age of the collection system, this study consolidated some tasks typically completed as part of an inflow/infiltration and sewer system evaluation study. This consolidation was undertaken in an effort to maximize the benefit to the community, while maintaining control over the cost of the study. The tasks completed as part of this study were divided into three categories:

- Infiltration/Inflow (I/I) Analysis and Sewer System Evaluation Survey (SSES) Field Work
- Data Analysis and Engineering Report Preparation
- Assumptions

The I/I analysis and SSES field work items were broken down further into work to be completed during periods of low groundwater (i.e., summer) and periods of high groundwater (i.e., fall or spring). Inflow sources were located during low groundwater conditions, and infiltration sources were located during high groundwater conditions. Table II-1 lists the field work tasks completed for this study.

**TABLE II-1
SUMMARY OF FIELD SERVICES UNDERTAKEN**

Task		Quantity	Test Period
1.	Building Inspections	159 buildings	Summer
2.	Smoke Testing	37,749 LF	Summer
3.	Dyed Water Testing	10 sites	Summer
4.	Manhole Inspections	47 manholes	Spring
5.	Baseline Flow Measurements	6 weir tests	Spring
6.	Flow Isolation	19,240 LF	Spring
7.	Closed Circuit Television Inspection	9,443 LF	Spring

Because this study consolidated certain tasks typically completed for an I/I analysis and SSES, several assumptions were made before beginning any field work. These assumptions lead to some project limitations that influenced this project. A summary of project assumptions and study limitations is presented here:

1. No continuous wastewater flow monitoring was completed, and no incremental flow measurements were collected. Such data is usually used to quantify infiltration rates during high and low groundwater periods and for estimating rainfall related inflow during wet weather periods. Daily flow records from the wastewater treatment plant flow meter were used to estimate the average annual amount of I/I into the collection system.
2. No continuous rainfall monitoring data was collected or analyzed to estimate the system wide quantity of inflow into the sewer system. Site specific rainfall monitoring is typically completed to compare the variation in gauged flow rates to rainfall intensity, total rainfall volume, rainfall rates per event, and rainfall duration per event for the purpose of identifying inflow and its components. Instead, results from smoke testing and house-to-house inspections completed for this study and results from previous studies were used to estimate the amount of inflow into the collection system.
3. No groundwater monitoring was completed to estimate peak or minimum infiltration rates or to correlate groundwater infiltration rates with groundwater elevations. For this study, it was assumed that the months of March through May represent seasonal high groundwater for the purposes of conducting flow isolation and CCTV work. Seasonal high flows and seasonal high infiltration rates, were confirmed by reviewing flows measured at the wastewater treatment plant.
4. No benefit/cost analysis was completed to determine whether infiltration rates were excessive enough (i.e., greater than 4,000 gpd/inch-mile) to justify the cost of performing the flow isolation or CCTV tasks. Flow isolation and CCTV inspection were concentrated on those sections of sewer line where available information indicates sewer lines are below the local groundwater level, and sections near the center of town, which has the highest population density.
5. No attempt was made to confirm areas of free flow versus restricted flow in the collection system. Discussion with the Town's wastewater treatment plant operator indicate no specific trouble areas where backups or blockages occur frequently.

C. Description of Study Area

The study area for this project included the portions of the Town connected to the sewerage collection system. The sewerage service area is located primarily in the center of town and serves approximately 45% of the Town's residences (D-H, 1980). It consists of approximately 7.2 miles of sewer line including, approximately 34,000 linear feet of 8-inch gravity sewer and approximately 2,500 linear feet of 12-inch gravity sewer. One sewage pump station with a 6-inch force main is part of the town owned and operated collection system, and several privately owned lift stations are found throughout the system. The Lamprey River winds through the center of town and is the receiving water for the Town's wastewater treatment plant discharge. Figure II-1 shows the existing wastewater collection

system for the Town of Epping. This mapping was provided by the Town for use in this study. Essentially, the entire study area is well served by roadways. According to discussions with the Town, development pressures have not significantly changed over the past several years. Most of the buildings appear to be single family residences with some multiple family residences and apartment and condominium complexes. Some commercial and limited industrial establishments are located throughout the town.

The original collection system was constructed under one construction contract during 1970 and 1971, hence, most of the existing system is about 25 years old. The existing collection system has not increased its service area substantially since the original system was constructed. The sewer lines constructed under the original contract are class 2400 asbestos cement sewer pipe with M-ring joints. Approximately 220 linear feet of the original system are cement-lined ductile iron. This pipe was used for crossing the Lamprey River from Water Street to the sewerage pump station (D-H, 1980). According to the Town's wastewater treatment plant operator, sewer pipe installed since 1971 has been mostly made of PVC.

The pump station serves approximately 84% of the Town's sewage service connections. This station is a prefabricated dry pit type and is equipped with two alternating vertical centrifugal sewage pumps each capable of discharging 250 gallons per minute (gpm) at 75 feet of total dynamic head. The force main from the pump station was constructed of Class 150 asbestos cement pressure pipe with ring-tite pressure joints (D-H, 1980). It discharges to a manhole at the intersection of Mill and Elm Streets.

All of the original manholes are made of precast concrete cement barrel sections with 1-½-inch x 1-½-inch poly joints. The pipe lines were sealed to manholes with non-shrink grout. Manhole frames and lids are of heavy duty construction without perforations.

Discussions with the Town's wastewater treatment plant operator did not identify any sewer segments of the collection system that frequently become blocked or manholes that overflow. The existing collection system does not have any bypass or overflow structures that would allow untreated wastewater to be discharged at any point in the system, except for discharge at the treatment plant. Also, the Town does not have a storm drain system.

The entire wastewater collection system was divided into six subsystems for this study as shown in Figure II-1. These subsystems, labeled A, B, B1, C, D, and E were selected to be identical to those used for previous investigations. Figure II-2 shows the identification system used throughout this study to reference manholes in each subsystem. All upstream tributaries in each subsystem flow to a common point, which is labeled as manhole number 1 for each subsystem.

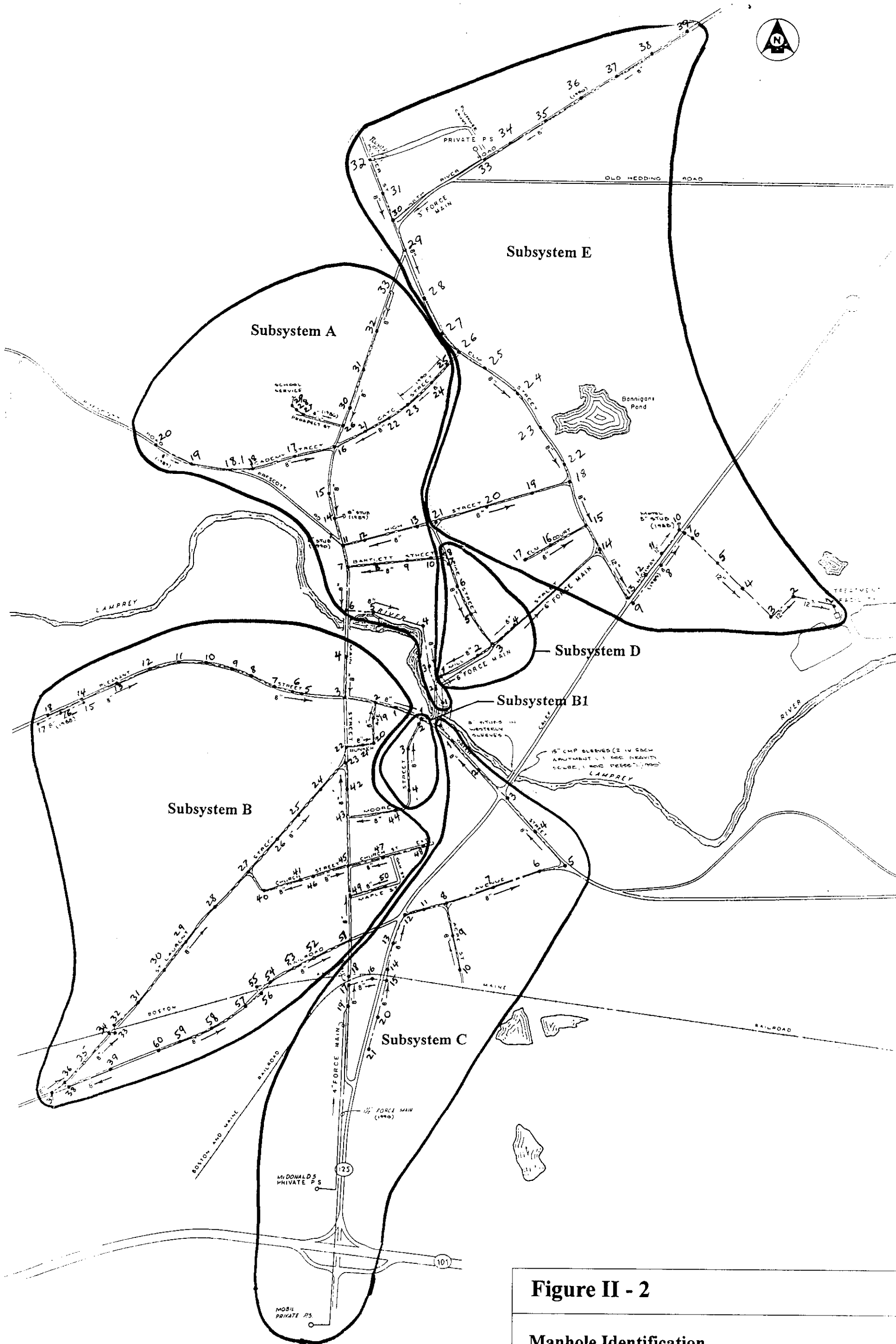
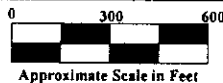


Figure II - 2

Manhole Identification
Mapping Prepared by: DuFresne Henry



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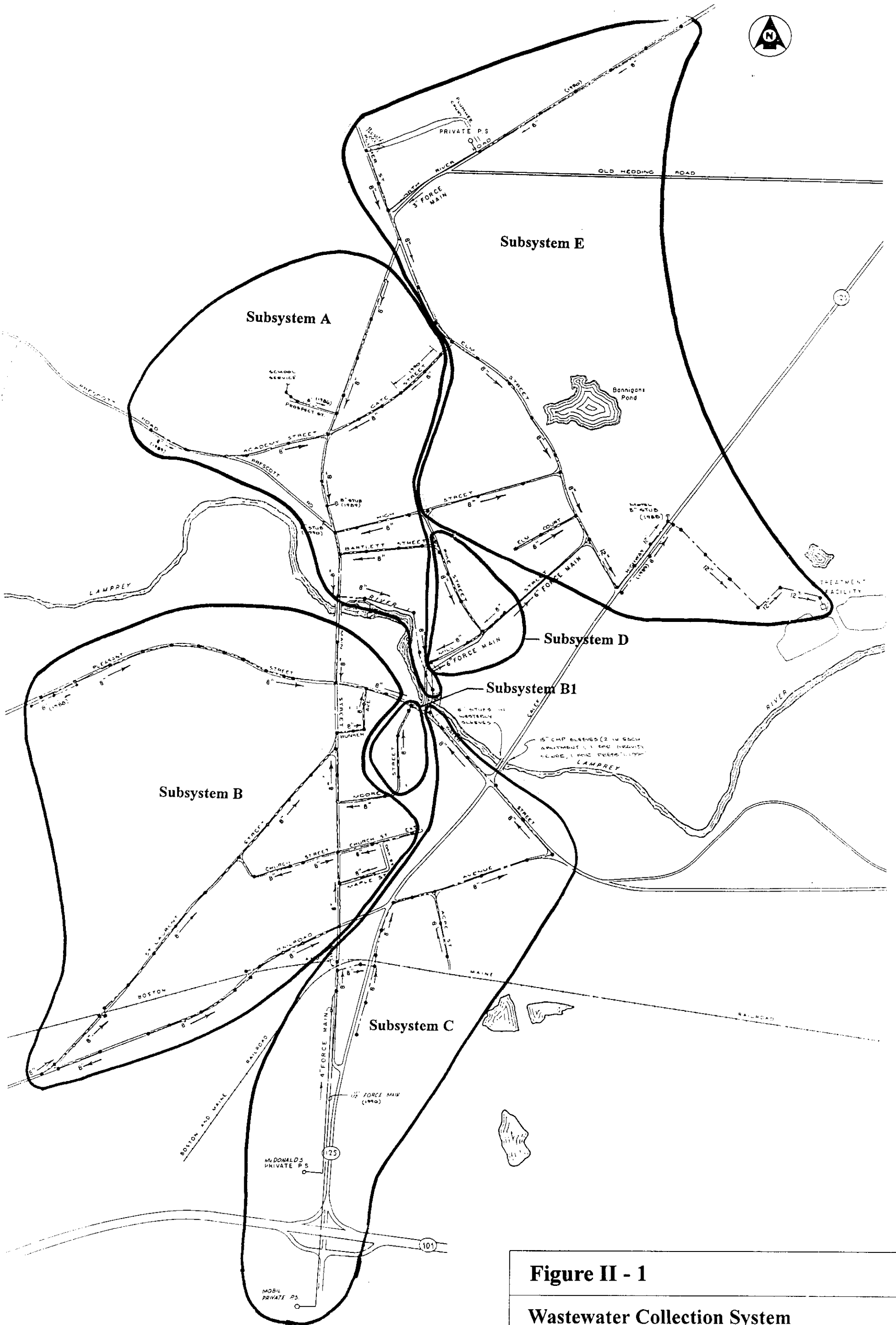
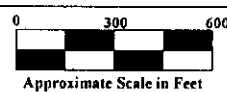


Figure II - 1

Wastewater Collection System
Epping, New Hampshire
 Mapping Prepared by: *DuFresne Henry*



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D. Subsurface Conditions, Topography, and Precipitation

Subsurface conditions, including the elevation of groundwater in relation to the depth of sewers in the collection system, are important items to consider when identifying areas where excessive infiltration most likely may occur. Sewers that are below the groundwater table throughout the year will exhibit higher infiltration rates than those only seasonally below the groundwater table. Dufresne-Henry (1980) studied available subsurface information to identify which sewers in the collection system are either seasonally, year-round, or never below the groundwater table. This information is summarized in Figure 3-1 of their report. A copy of Figure 3-1 is contained in Appendix A for reference. As discussed later, this information was used to help limit the areas to be investigated for sources of infiltration.

Topography and precipitation, along with soil characteristics, are important items to consider when identifying areas that may be affected by inflow through cellar drains, yard and area drains, foundation drains, manhole covers, surface runoff, or other drainage. Figure 3-2 of the Dufresne-Henry 1980 report illustrates the qualitative drainage characteristics of the service area and the location of borings taken in 1965 for the purpose of designing and constructing the sewer collection system. Soil characteristics were identified as either well-drained or poorly-drained. From this information, it is believed that a large area of Epping's service area is manmade land, which requires on-site investigations for more accurate classifications of drainage characteristics.

Rockingham County and the Town of Epping are located in the southeast section of New Hampshire and have noticeable seasonal changes. The summers are warm with a mixture of sunshine and precipitation, while the winters are cold with precipitation occurring in the form of rain or snow. Average precipitation in the area is equivalent to 42 inches of rainfall.

While some of the information provided in the 1980 report has been used throughout this study, the reader should refer to that report for more detail about the service area characteristics. Also, that report contains copies of the 1965 boring logs used to identify areas of high groundwater.

The 1980 report estimated the following percentages of the sewer collection system under the groundwater table for varying amounts of time throughout the year.

Never Submerged	32 percent (32%)
Seasonally Submerged	41 percent (41%)
Year-round Submerged	27 percent (27%)

Although that data was evaluated more than 15 years ago, based on discussions with the Town's wastewater treatment plant operator and an estimate of the length of existing sewers making up the collection system, the system has not changed considerably since that study was completed. Hence, the areas that are submerged seasonally or year-round were assumed to include approximately 68 percent (68%) of the existing collection system. Based on the estimated 36,500 linear feet of existing gravity sewer, 25,000 linear feet may be under the

groundwater table for at least part of the year. This information was used to help guide further field investigations to identify those areas most likely to exhibit high rates of infiltration.

E. Existing Wastewater Treatment Facilities

The Town operates one wastewater treatment facility located on Lagoon Road. The existing facility is an aerated lagoon system that discharges to the Lamprey River. The existing wastewater treatment facilities include a comminutor at the headworks followed by two aerated lagoons and a chlorine contact chamber.

The flows to the plant are approaching the design capacity of the existing facilities. The facility was designed for an average daily flow of 135,000 gpd, a maximum daily flow of 270,000 gpd, and a peak flow of 405,000 gpd (D-H, 1980). Based on the plant's wastewater flow records, the average daily flow into the plant during 1994 was about 128,000 gpd and in 1995 about 120,000 gpd.

The existing National Pollutant Discharge Elimination System (NPDES) Permit, issued by the New Hampshire DES, allows a maximum daily discharge from the plant of 265,000 gpd. Because the plant can often regulate the discharge from the plant to the river by using the existing stabilization ponds for storage, the plant typically discharges less than the maximum daily discharge allowed by the NPDES Permit. During the summer months, when flow in the Lamprey River is below 6 cfs, the Town is prevented by its NPDES Permit from discharging to the river. Through proper planning, the plant is able to release additional wastewater during late spring. This acts to drawdown the ponds in preparation of storing the wastewater flow during low flow summer months, when discharge to the river is discontinued.

The existing NPDES Permit is scheduled to be renewed by the State of New Hampshire. The Town expects the existing NPDES Permit to be modified requiring more stringent effluent limitations to be met. The proposed limits provided by the NH DES are as follows:

**TABLE II-2
ANTICIPATED NPDES PERMIT EFFLUENT LIMITATIONS**

Effluent Parameter	Monthly Average (mg/l)	
	Summer (June 1 to Oct. 31)	Winter (Nov. 1 to May 31)
CBOD	11	11
Dissolved Oxygen	> 7.0	> 7.0
Total Phosphorus	0.75	0.75
TKN	3.7	5.2
Chlorine Residual	0.12	0.06

To meet these more stringent effluent limitations, the Town will need to upgrade its existing treatment systems. This upgrade will be required regardless of whether I/I is removed. However, removal of I/I will help control the costs to operate and maintain the upgraded wastewater treatment plant. To date, the Town has received preliminary estimates of what possible upgrades will be required. Possible biological treatment schemes include modifying the aeration lagoons to run in a step aeration mode or installing a packed bed biological reactor system. Other process upgrades may include adding chemical addition and sand filters for phosphorus removal. As discussed later, this information was used to evaluate and prioritize corrective measures to eliminate I/I identified by this study.

III. BUILDING INSPECTION RESULTS

The purpose of completing internal building inspections, or house-to-house inspections, is to visually identify private inflow sources and to establish whether property owners within the community are in compliance (or not in compliance) with local sewer ordinances pertaining to infiltration and inflow sources. For this study, 159 homes and businesses were contacted, in cooperation with town officials, to have house-to-house inspections completed. These homes were selected primarily because they were located within areas identified in previous reports to be areas with high groundwater levels. A copy of the log sheets and other data collected during this phase of the work is contained in Appendix B.

Each home and business establishment within the designated study area was visited to determine whether roof drains, cellar floor drains, sump pumps, or other such I/I sources were present, and where they discharged. The inspector recorded the findings for each property visited on a separate log sheet. A follow-up visit was made to properties where no one was present during the initial inspection attempt. If the inspector was not admitted into the building, it was noted on the log sheet.

Table III-1 summarizes the buildings where sump pumps were observed to be located in basements, but currently not plumbed directly to the sanitary sewer system. These sump pumps should not contribute any inflow to the existing sewer collection system. However, a total of 36 such sump pumps was identified in this category. Often, buildings with sump pump connections maintain two possible connections, one that discharges outside and one that could discharge to the sewer system during times when flows into the house are high and outside weather conditions do not make discharge outside feasible. During such conditions, these owners may switch the sump discharge to the sewer system in order to avoid other difficulties such as frozen discharge lines or the inability for the discharge to infiltrate into frozen subsurface. Therefore, the Town should be aware of these sump pump locations and if possible, verify that they continue to not be connected to the sewer system.

Table III-2 summarizes those buildings where inflow sources were identified or suspected of being connected directly to the sanitary sewer system. The inflow sources identified by this phase of the work included nine (9) sump pumps observed to be directly plumbed to the sanitary sewer system, two (2) buildings with open drain pipes in the basement, and eight (8) buildings with roof leaders or yard drains that may be suspected of being connected directly to the sewer system. The buildings with suspected roof leaders and yard drain connections to the sewer system were investigated further, during the dyed water phase of work discussed in Section V, to see if these sites were in fact directly connected to the Town's collection system.

In addition to these confirmed or suspect sites, Table III-2 summarizes the nine buildings where inspectors were denied entry. Each of these buildings is in areas identified with high groundwater and also areas with sump pumps observed in adjacent buildings. Most of the buildings in these areas have sump pumps as shown in Tables III-1 and III-2. Therefore, it

TABLE III-1
SUMMARY OF OBSERVED SUMP PUMPS NOT DISCHARGING TO
SANITARY SEWER

Street Number and Address	
0000	Acre Street
0004	Acre Street
0010	Acre Street
0015	Acre Street
0037	Church Street
0041	Church Street
0059	Church Street
0056	Main Street
0087	Main Street
0095	Main Street
0110	Main Street
0069	Main Street
0010	Moore Street
0001	Pleasant Street
0003	Pleasant Street
0007	Pleasant Street
0024	Pleasant Street
0027	Pleasant Street
0032	Pleasant Street
0043	Pleasant Street
0064	Pleasant Street
0022	Railroad Avenue
0038	Railroad Avenue
0042	Railroad Avenue
0098	Railroad Avenue
0134	Railroad Avenue
0041	St. Laurent Street
0045	St. Laurent Street
0060	St. Laurent Street
0072	St. Laurent Street
0085	St. Laurent Street
0088	St. Laurent Street
0017	Water Street
0019	Water Street
0037	Water Street
0041	Water Street - Hogarth Country Day School

TABLE III-2
SUMMARY OF INFLOW SOURCES IDENTIFIED OR SUSPECTED DURING
HOUSE-TO-HOUSE INSPECTIONS

Type of Inflow Source	Street No. and Address
1. Observed Sump Pumps Connected to Sewer	0014 Acre Street 0023 Church Street 0072 Main Street 0100 Main Street 0023 Pleasant Street 0074 Railroad Avenue 0100 Railroad Avenue 0104 Railroad Avenue 0018 Water Street
2. Observed Open Drains in Basement	0004 Acre Street 0041 Water Street - Hogarth Country Day School
3. Suspect Roof Leaders	0088 Main Street 0003 Pleasant Street 0032 Pleasant Street 0045 Pleasant Street 0048 Pleasant Street 0042 Railroad Avenue 0018 Water Street
4. Suspect Yard Drains	0077 St. Laurent Street
5. Inspectors Refused Entry	0007 Church Street 0106 Main Street 0117 Main Street 0105 Main Street 0020 Pleasant Street 0019 Railroad Avenue 0032 St. Laurent Street 0023 Water Street 0051 Water Street

is reasonable to expect that some of these buildings may have sump pumps located in the basements. However, without access, this cannot be confirmed.

Based on the results of the house-to-house inspections, 18 separate buildings were identified to have either observed, or suspected inflow sources to the sewer system. Inspectors were denied access to another nine buildings, so the existence of inflow sources at these buildings could not be determined. These 27 buildings represent about 17 percent (17%) of the total number of buildings inspected, which may represent direct inflow connections to the Town's sewer system. In addition, the 36 sump pumps observed not to be directly connected to the sewer system during the inspection, represent potential inflow sources if the discharge piping is ever modified. Including these sump pumps, a total of 63 of the 159 buildings (or 40%) inspected have the potential to contribute significant amounts of inflow to the sewer collection system.

As discussed in the recommendations section, Section XI, the Town should take action, if possible, to ensure that all of the positively identified inflow sources are disconnected from the sewer system. In addition, the Town should complete follow-up inspections of all potential identified private inflow sources to confirm that they remain disconnected in the future.

IV. SMOKE TESTING RESULTS

The purpose of smoke testing is to identify locations of storm water and groundwater entry into the sanitary sewer system. Smoke testing is used to locate direct connections to the sewer system including downspouts, area drains, driveway drains, stairwell drains, and patio drains. Indirect connections from storm sewers or ditches which require I/I to pass through soil seams can also be identified with smoke testing under specific circumstances. In the case of Epping, no separate storm sewers are known to exist in the Town. Therefore, direct connections from storm drainage systems were not expected to be of concern.

The methodology followed for smoke testing the Town's sewer system began by coordinating this work with the fire department, police department, and the office of the selectman. A meeting was held on August 14, 1995 to discuss the testing, demonstrate the equipment to be used, and understand the requirements for notifying the town officials of the upcoming field work. The public was notified of the smoke testing work by sending a public notification, both in the local paper and by a door-to-door leafleting program. This work was coordinated with town officials, and all residents were given the town hall telephone number to call for additional information. A copy of the notification used for the Town is shown in Figure IV-1.

The smoke testing work was conducted in the summer of 1995, during a period of anticipated low groundwater. It was determined that the entire sewer collection system would be smoke tested because it was the Town's belief that inflow was the primary I/I problem in the system.

Smoke was produced by 3 minute smoke candles, which were forced into each manhole using a gasoline-powered, high-volume blower. Lines were restricted at the upstream and downstream manholes of each test segment to concentrate the smoke within the test segment. Each test segment was typically two manhole reaches in length.

"Suspect" inflow sources were recorded along with confirmed sources which actually smoked. Examples of suspect sources include driveway drains, stairwell drains, window well drains, patio and area drains, and downspouts piped underground or to the foundation.

Smoke testing was performed on a total of 37,749 LF of sanitary sewer within the study area as shown in Table IV-1. The sewer collection system map (Figure II-1) does not show all of the sewer segments that were tested during this phase of the work. In Subsystem E, the sewer collection system that serves the Pine Pond Residential Park was not shown. These sewer segments are located in Highland Drive, Shore Drive, and Edgewood Drive. A copy of a map, which was obtained by the field crew during testing, and showing these sewer lines is contained in Appendix A for reference. Also, in Subsystem B, the sewer lines connecting to the Whispering Pines Apartment complex were not shown on the collection system map. These segments in Subsystems B and E, which were identified in the field, were smoke tested.

SEWER WORK NOTICE

Utility Pipeline Services, Inc. is currently conducting a sewer system study in the town of Epping for the purpose of locating sources of storm water inflow to the sanitary sewer. The study will locate direct and indirect connections such as catch basins, area drains, roof drains, broken sewer pipe and deteriorated pipe joints. One of the methods to be utilized is smoke testing of the sanitary sewer.

During testing, white smoke is introduced through the sanitary sewer system via a smoke generating machine. During this procedure white smoke will be venting from holes in manhole covers located on the street and plumbing vent pipes located on or near your roof surface. **THIS IS NORMAL AND SHOULD NOT BE CAUSE FOR ALARM.**

Smoke should not enter your premise unless there is a dry trap in your basement floor drain or any unused plumbing fixtures. You may wish to pour some water down your basement floor drain or unused plumbing fixture to insure that the drain trap will be effective. Smoke could also enter the building through defective plumbing. The owner should note this because if odors were to develop in the sewer system, these odors may possibly enter your building through the defective plumbing.

Should smoke be detected within the building, **DON'T BE ALARMED.** The smoke is **NON-TOXIC AND NON-STAINING.** Simply ventilate the home and report the presence of smoke to the people conducting the test outside in the vicinity of your building. If possible, they will assist you in locating the source which allowed smoke to enter the building.

Your cooperation is appreciated in this effort to provide you with sanitary sewer service for the lowest possible cost. If you have any questions, please call the Selectman's office at 679-5441.

PLEASE NOTE:

- A) You are not required to be home when the testing is being performed on your street.
- B) Once you receive this notice, the test will be performed 24 to 72 hours after notification. However, rain, holidays, and weekends may shift test periods beyond the 24 to 72 hour time frame.

TABLE IV-1
SUMMARY OF SMOKE TESTING BY SUBSYSTEM

Subsystem	Length (Linear Feet)
A	7,630
B	13,114
B1	562
C	4,501
D	1,490
E	<u>10,452</u>
	Total 37,749

The smoke testing field work uncovered only two direct inflow sources that smoked. The first case was a broken elbow drain connected to an abandoned building. The elbow was located slightly above ground elevation. Since the only water that could enter this broken drain was rainfall that fell directly onto it, this source would not be a significant source of inflow to the system. The second case was an open drain pipe located in an open field, nearby to an old mobile home. Only runoff that falls within its small drainage area could be captured by this pipe, so this source was not a significant source of inflow. After this site was found, and while the smoke testing work was ongoing, the Town's wastewater treatment plant operator indicated that he had already sealed off that drain by filling it with a mix of concrete, thereby eliminating future inflow.

Field records and data collected during the smoke testing work are contained in Appendix C. Copies of reference photographs and field sketches of the two identified smoke sites are included in this appendix.

V. DYED WATER TESTING RESULTS

The purpose of dyed water testing, or rainfall simulation, is to identify and confirm inflow sources to the sanitary sewer system. This test is useful to identify those suspect sites uncovered during the smoke testing and building inspection phases of this work, especially suspect downspouts and area drains. If connected to the sewer system, these sites may not have been uncovered during the previous testing phases because of trapped building service laterals or clogging in the drain or downspout.

Dyed water testing was completed on June, 25, 1996 for 10 suspect roof leaders or yard drains identified during the building inspections or during the smoke testing work. None of these suspect sites were connected to the sanitary sewer system. Appendix D contains documentation of the suspect sites and addresses of the dyed water testing completed.

VI. FLOW ISOLATION RESULTS

Flow isolation work, which was conducted to further pinpoint and quantify the amount of infiltration in the collection system, was completed in two phases. In the first phase, baseline infiltration measurements were taken for each of the six subsystems. This information was compared with data previously collected by others to gain insight into whether infiltration into the sewer system appears to be increasing over time. These measurements were taken between 12:00 AM and 5:00 AM on the morning of March 15, 1996.

The results of the baseline infiltration measurements are shown in Table VI-1. As shown, only Subsystem E approached an infiltration rate of 4,000 gpd per inch-mile of sewer line, which is often used as an indicator of excessive infiltration. Each of the other subsystems showed lower amounts of infiltration at the time the measurements were taken. Overall, the wastewater collection system showed infiltration rates under 3,000 gpd per inch-mile of sewer line. This is a number indicative of moderate amounts of infiltration in the sewer system.

Based on the results of the baseline measurements, individual sewer segments were identified for further flow isolation testing. The sewer segments selected for flow isolation testing are shown in Figure VI-1. Several segments were selected because they are in the center of town, which is the most heavily populated area. Most segments were selected because they are in areas believed to be under groundwater throughout most of the year according to previous reports (D-H, 1980). The sewer lines not selected in subsystems A, C, and E were expected to be above the groundwater table for a significant amount of the year. Also, a review of the surface contours in the area indicated these lines to be at higher elevation than those near the river. Therefore, these areas were not expected to be large contributors of infiltration into the sewer system. All of Subsystem D was tested by flow isolation. Because the scope of this phase limited the length of sewer pipelines to be flow isolated, some areas of Subsystem B, which indicated some of the higher infiltration flowrates in the baseline measurements, were not able to be flow isolated.

This phase of the flow isolation work was conducted during the early morning hours of April 3 and 4, 1996, when sanitary flows in the collection system are assumed to be minimal. Isolation of sewer segments was undertaken by blocking the upstream sewer line, waiting for flows in the isolated segment to stabilize, and measuring flows in the isolated segment using a portable flow measuring weir. Because measurements were taken in the early morning hours, between 2:00 A.M. and 5:00 A.M., all of the flow in the segment was assumed to be attributed to infiltration.

Table VI-2 shows the results of the flow isolation work completed for this study; only the segments isolated are shown in this table. Approximately 19,240 L.F. of sewer line was flow isolated. Overall, infiltration into the sewer lines that were isolated amounted to more than 120,000 gpd. As with the baseline measurements, Subsystems B, D, and E showed the highest amounts of infiltration, when measured as the infiltration per foot of pipe flow isolated. The infiltration ranged from 6.8 gpd/ft in Subsystem D, 7.2 gpd/ft for Subsystem B, and 9.7 gpd/ft in Subsystem E. All of the other subsystems showed less than 3.7 gpd/ft of infiltration.

TABLE VI-1
BASELINE INFILTRATION MEASUREMENTS
 Taken March 15, 1996

Subsystem/Description	Estimated Length	Diameter	Inch-Miles	Baseline Infiltration Measurements	
	(Feet)	(Inch)	(Inch-mile)	(GPD)	(GPD per inch-mile)
Subsystem A					
Gravity Line in Subsystem	7,630	8	11.56	21,600	1,870
Estimated Length below Groundwater *	1,300				
Percent under Groundwater	17%				
Subsystem B					
Gravity Line in Subsystem	13,120	8	19.88	48,960	2,460
Estimated Length below Groundwater *	3,200				
Percent under Groundwater	24%				
Subsystem B1					
Gravity Line in Subsystem	560	8	0.85	1,440	1,700
Estimated Length below Groundwater *	0				
Percent under Groundwater	0%				
Subsystem C					
Gravity Line in Subsystem	4,500	8	6.82	12,960	1,900
Estimated Length below Groundwater *	2,550				
Percent under Groundwater	57%				
Subsystem D					
Gravity Line in Subsystem	1,490	8	2.26	6,480	2,870
Estimated Length below Groundwater *	750				
Percent under Groundwater	50%				
Subsystem E					
8" Gravity Line in Subsystem	7,950	8	12.05		
12" Gravity Line in Subsystem	2,500	12	5.68		
Total Gravity Line in Subsystem	10,450			69,120	3,900
Estimated Length below Groundwater *	4,250				
Percent under Groundwater	41%				
Total for All Subsystems					
Total Gravity Lines in Sewer System	37,750		59.1	160,560	2,720
Total Length Gravity Lines below Groundwater	12,050				
Percent under Groundwater	32%				

* Estimated length of gravity sewer line below groundwater year round as taken from Figure 3-1 of D-H 1980.

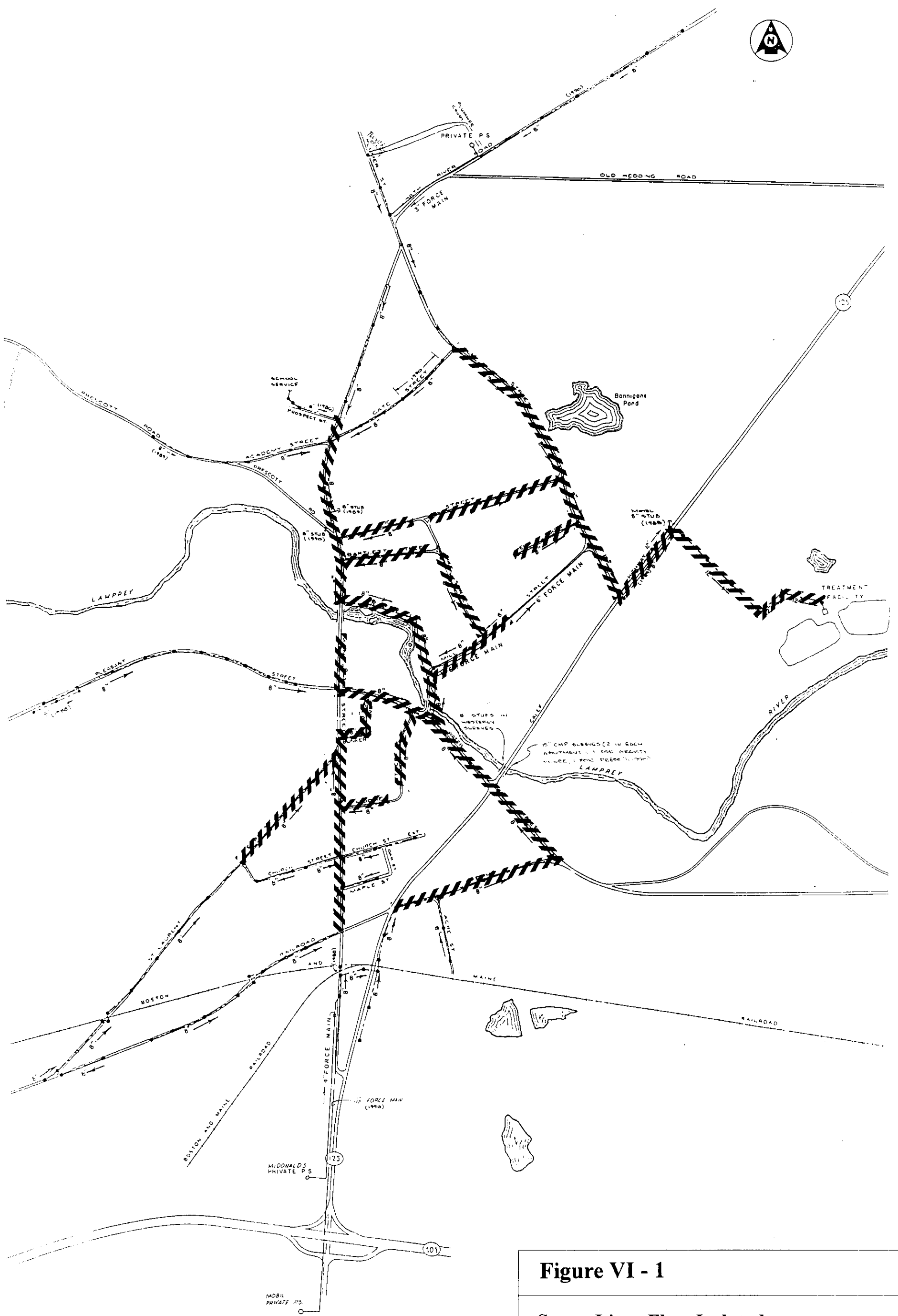


Figure VI - 1

Sewer Lines Flow Isolated
Mapping Prepared by: DuFresne Henry

Approximate Scale in Feet

Sverdrup

TABLE VI-2
SUMMARY OF FLOW ISOLATION MEASUREMENTS BY SUBSYSTEM
 Collected April 3-4, 1996

Subsystem/Roadway Location	Flow Isolation Measurements									Field Comments
	Diameter	Sewer Length Flow Isolated	From MH	To MH	Infiltration in Isolated Segment	Infiltration per Foot of Pipe Isolated	Segment Selected for CCTV Inspection	Observed Manhole Infiltration	Observed Service Flow	
	(Inches)	(Feet)			(GPD)	(GPD/Ft)	(Feet)	(GPD)	(GPD)	
Subsystem A										
Main Street	8	221	26	16	0	0.0	0	6,480	0	Manhole 16 leaking
Main Street	8	542	16	14	0	0.0	0	0	0	
Main Street	8	209	14	11	0	0.0	0	360	0	Manhole 11 leaking
Main Street	8	148	11	7	0	0.0	0	0	0	
Main Street	8	308	7	6	0	0.0	0	0	0	
High Street	8	538	13	11	1,080	2.0	0	0	0	
Bartlett Street	8	613	10	7	1,080	1.8	0	0	0	
Easement between Main and Mill Streets	8	1,127	6	2	5,040	4.5	1,127	0	0	
Easement off Mill Street	8	160	2	1	0	0.0	0	0	0	
Mill Street	8	86	D-1	A-2	0	0.0	0	0	0	
Total for Subsystem A	8	3,952	-	-	7,200	1.8	1,127	6,840	0	5,760 GPD flow in lines not tested by flow isolation
Subsystem B										
Main Street	8	539	51	45	360	0.7	0	0	0	
Main Street	8	808	45	23	1,440	1.8	0	0	0	
Main Street	8	293	4	3	0	0.0	0	0	0	
Main Street	8	206	3	2	4,320	21.0	206	0	0	Leakage Observed at Pipe Crown
Water Street	8	361	2	B1-1	0	0.0	0	0	0	MH B1-1 in gutter line
Main Street and Bunker Ave	8	674	23	2	8,640	12.8	674	0	0	MH 2 in gutter line
St. Laurent Street	8	1,051	27	23	15,840	15.1	1,051	0	0	
Moore Street	8	351	44	43	360	1.0	0	0	0	
Total for Subsystem B	8	4,283	-	-	30,960	7.2	1,931	0	0	38,880 GPD flow in lines not tested by flow isolation

TABLE VI-2 (Continued)
SUMMARY OF FLOW ISOLATION MEASUREMENTS BY SUBSYSTEM
 Collected April 3-4, 1996

Subsystem/Roadway Location	Flow Isolation Measurements									Field Comments
	Diameter	Sewer Length Flow Isolated	From MH	To MH	Infiltration in Isolated Segment	Infiltration per Foot of Pipe Isolated	Segment Selected for CCTV Inspection	Observed Manhole Infiltration	Observed Service Flow	
	(Inches)	(Feet)			(GPD)	(GPD/Ft)	(Feet)	(GPD)	(GPD)	
Subsystem B1										
Moore Street	8	562	4	1	1,800	3.2	0	0	0	
Water Street	8	147	1	A-1	0	0.0	0	0	0	
Total for Subsystem	8	709	-	-	1,800	2.5	0	0	0	Zero Infiltration per 1988 DH Report
Subsystem C										
Water Street	8	941	5	2	0	0.0	0	0	0	
Water Street	8	312	2	1	0	0.0	0	0	0	MH 1 has cracked pre-cast walls with signs of previous leakage
Railroad Ave	8	335	12	8	720	2.1	0	0	0	
Railroad Ave	8	925	8	5	8,640	9.3	925	720	0	MH 5 leaking.
Total for Subsystem	8	2,513	-	-	9,360	3.7	925	720	0	3,600 GPD flow in lines not tested by flow isolation
Subsystem D										
Pike Street	8	782	8	3	4,320	5.5	782	0	0	
Mill Street	8	301	4	3	1,440	4.8	301	0	0	
Mill Street	8	407	3	1	4,320	10.6	407	0	0	
Total for Subsystem	8	1,490	-	-	10,080	6.8	1,490	0	0	Zero Infiltration per 1988 DH Report

TABLE VI-2 (Continued)
SUMMARY OF FLOW ISOLATION MEASUREMENTS BY SUBSYSTEM
Collected April 3-4, 1996

Subsystem/Roadway Location	Flow Isolation Measurements									Field Comments
	Diameter	Sewer Length Flow Isolated	From MH	To MH	Infiltration in Isolated Segment	Infiltration per Foot of Pipe Isolated	Segment Selected for CCTV Inspection	Observed Manhole Infiltration	Observed Service Flow	
	(Inches)	(Feet)			(GPD)	(GPD/Ft)	(Feet)	(GPD)	(GPD)	
Subsystem E										
Elm Street	8	1,127	26	22	1,440	1.3	0	720	0	MH 22 leaking. 720 GPD from upstream of MH 26; 1,440 GPD from private sewer
Elm Street	8	156	22	18	14,400	92.3	156	0	0	Infiltration may be coming from private sewer that tee's in between MH 22 and MH 18
Elm Court	8	508	17	15	14,400	28.3	508	0	0	Definite sump pump activity. Observed flow variations with peak of 20,160 GPD and minimum of 5,670 GPD.
Elm Street	8	376	18	15	0	0.0	0	0	0	
Elm Street	8	156	15	14	720	4.6	156	0	0	
High Street	8	1,006	21	18	8,640	8.6	1,006	0	0	
Calef Highway	8	615	9	7	0	0.0	0	0	0	
Calef Highway	12	961	14	10	10,080	10.5	961	180	8640	MH 10 leaking
Calef Highway	12	50	10	7	0	0.0	0	0	0	
Lagoon Road	12	1,038	7	2	10,800	10.4	1,038	0	0	
Lagoon Road	12	300	2	1	720	2.4	0	0	0	
Total 8" Gravity Line in Subsystem	8	3,944	-	-	39,600	10.0	1,826	720	0	
Total 12" Gravity Line in Subsystem	12	2,349	-	-	21,600	9.2	1,999	180	8640	
Total for Subsystem	8/12	6,293	-	-	61,200	9.7	3,825	900	8,640	720 GPD flow in lines not tested by flow isolation
Total for All Subsystems										
Total 8" Gravity Line in Subsystem	8	16,891	-	-	99,000	5.9	7,299	8,280	0	
Total 12" Gravity Line in Subsystem	12	2,349	-	-	21,600	9.2	1,999	180	8,640	
Total for All Subsystems	-	19,240	-	-	120,600	6.3	9,298	8,460	8,640	

Table VI-2 also shows the segments that were selected to be inspected using Closed Circuit Television (CCTV). The segments with the highest infiltration, measured as gpd per foot of pipe, were selected for further testing. In addition, in cases where segments with high infiltration were separated by segments with low infiltration, the segments with low infiltration were included for CCTV inspection in order to evaluate the potential for infiltration migration along the sewer line.

During the flow isolation work, the field crews noted any unusual flow occurrences. As shown by the field records, several manholes or connections between manholes and sewer lines showed visible infiltration. While conducting work on the Elm Court sewer segment, the field crews identified definite sump pump activity. Flows in this segment varied periodically from a low of 5,670 gpd to a high of 20,160 gpd. The average flow during this time was estimated to be 14,400 gpd. The private sewer servicing the Pine Pond Residential Park, adjacent to Brannigan's Pond in Subsystem E, was running at a steady rate of 14,400 gpd. This high flow was unusual because the measurements were taken in the early morning hours. Since the sewer servicing this residential park is privately owned, no additional testing to identify the source of the high flows was undertaken.

The data summarized in Table VI-2, indicated that most of the significant infiltration was captured during flow isolation data collection. For each subsystem where the entire system was not isolated, the field crews noted the flow contribution due to the up gradient (untested) sewer lines. For most of the subsystems, the remaining infiltration was relatively small when measured as the amount of gallons per day per foot of untested sewer line. However, Subsystem B continued to show the highest amounts of infiltration. The 38,880 gpd infiltration measured from the approximately 8,900 LF of sewer line not isolated showed more than 4 gpd/ft of remaining infiltration. This amount was still less than the worst conditions of the segments selected for testing by CCTV.

VII. MANHOLE INSPECTION RESULTS

The purpose of manhole inspections is to determine the actual physical conditions of this part of the sewer system. The data generated is useful, not just for this study, but for use by the Town as an integral part of a routine sewer maintenance program. This data is also useful to verify sewer line configurations and subsystem boundaries.

The manhole inspection work gathered information about each manhole including, the condition, shape and size of the manhole frame and cover, defects such as cracks and breaks in the walls, shelf, or invert, and estimated infiltration rates. A copy of all field records taken during this work is contained in Appendix E.

The manholes inspected were located in the areas where CCTV inspection of the sewer system was conducted. A total of 47 manholes were identified for inspection. Figure VII-1 shows the areas where these manholes are located. Manhole inspection was completed May 28 and 29, 1996. Of the 47 manholes identified, nine were buried or paved over and could not be inspected. Table VII-1 lists those manholes that were not found because they appear to be paved over. This table also lists three manholes found with the manhole covers below grade. These defects may allow inflow into these manholes. These manholes should be repaired to raise the covers to be at grade with the surrounding landscape. This corrective action will help reduce the amount of inflow into the collection system and allow regular inspection in the future.

**TABLE VII-1
SUMMARY OF BURIED MANHOLES**

Subsystem/Manhole Defect	Manhole Number	Roadway
Subsystem B Buried Manhole	MHs 20 and 21	Bunker St
	MHs 24, 25, and 26	St. Laurent St
Subsystem C Buried Manhole	MHs 6, and 7	Railroad Ave
Manhole Cover Below Grade	MHs 5 and 8	Railroad Ave
Subsystem E Buried Manhole	MH 6 MH 11	Lagoon Rd Route 125
Manhole Cover Below Grade	MH 10	Route 125

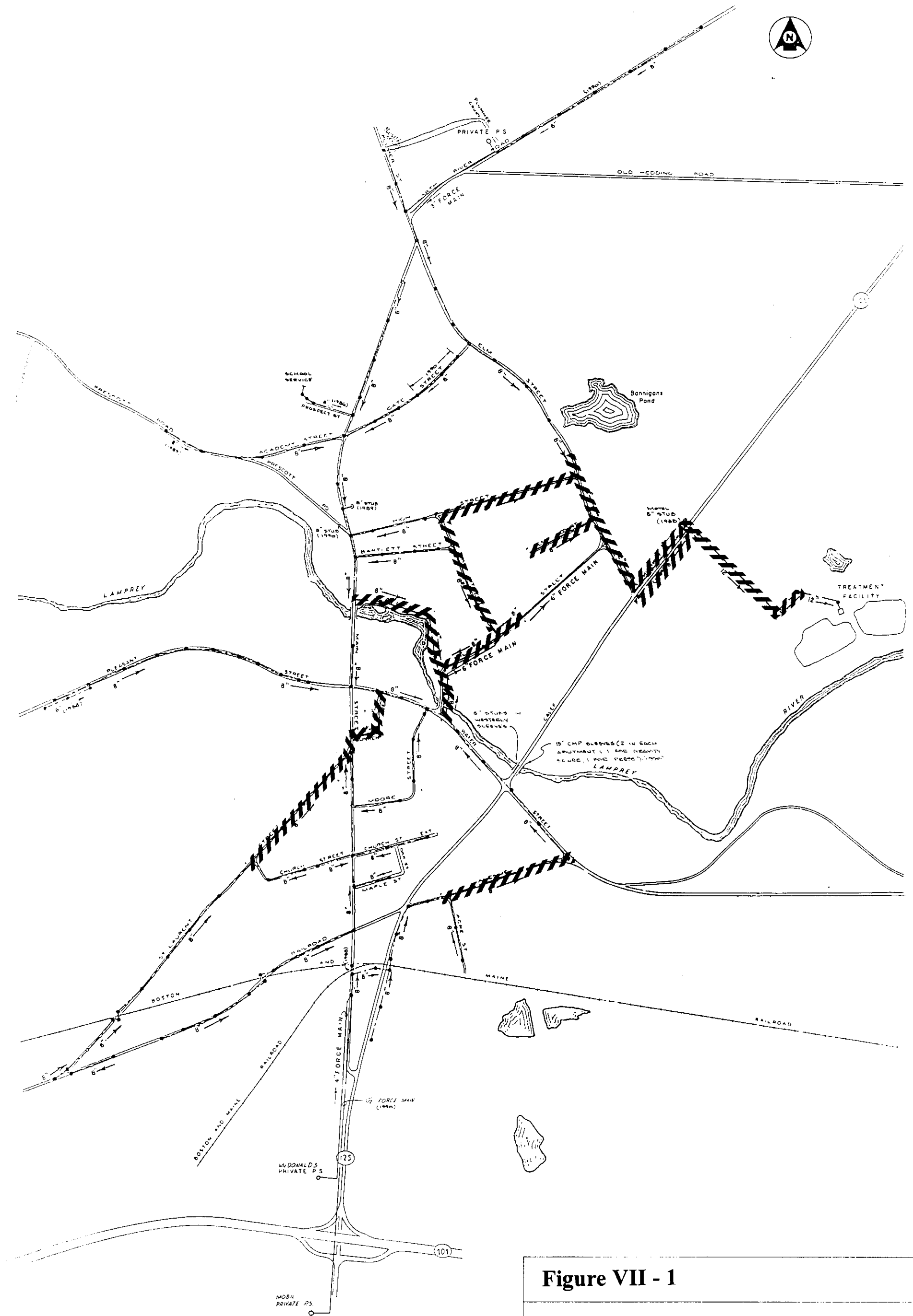
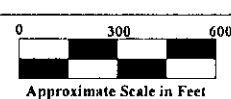


Figure VII - 1

Manholes Inspected
Mapping Prepared by: DuFresne Henry



Sverdrup

The walls of the manholes that could be inspected are of precast concrete construction, while the floor, inverts, and corbels are made of brick. All appear to remain structurally sound. The walls, floors, and inverts of most of the manholes that could be inspected appeared to be in fair to good condition. However, 28 of the manholes inspected showed signs of missing mortar in the corbel section. In these, the corbel sections were rated as poor to fair.

As part of the inspection, each line entering and leaving the manhole was visually inspected for visible infiltration sources. Data collected from this work indicated that seven (7) of 39 manholes (18%) showed visible leakage through joint defects where the manhole and sewer line connect. Another six (6) manholes showed signs of mineral deposits at joints, which are typical indications of previous leakage. These 13 manholes, amounting to 33% of the 39 manholes inspected, revealed infiltration of 11,880 gpd at the time of the inspection. In addition, data collected during the flow isolation work noted an additional four (4) manholes that were leaking, but which were not included in the manholes inspected in this phase of the work.

Based on information provided from previous studies (D-H, 1980), the pipeline connections to the manholes could be expected to be a significant defect because of the type of construction used to install the manhole. That is, the connections between the manhole and sewer lines were made only with non-shrink grout. Current sewer installation construction techniques use rubber seals, which provide a tighter and longer-lasting seal between the pipe and manhole.

VIII. CLOSED CIRCUIT TELEVISION (CCTV) RESULTS

Closed-circuit television inspection was conducted within sewer segments that showed the highest amount of infiltration during the flow isolation phase of this work. These segments are located in areas suspected to contribute significant amounts of infiltration. Figure VIII-1 shows the sewer lines inspected by CCTV as part of this study. Sewer lines within areas known to have high groundwater levels and sewer lines next to waterways were included in the CCTV program.

The methodology used for the CCTV work included flushing the lines to be inspected with high pressure water. Any debris or other material was pushed down the line to the wastewater treatment plant. After cleaning the line, a closed-circuit television was pulled through the sewer segment to be investigated. A videotape log of the procedure was kept and written records were completed in the field.

CCTV inspection was performed to further pinpoint infiltration sources and to determine the current condition of the sewer system. Field work was conducted on May 23, 24 and 28, 1996. A total of 43 sewer segments, consisting of 9,443 L.F. of sewer lines, were inspected. Field crews provided a summary report and four (4) videotapes documenting the inspection. A copy of the data collection records and an index of videotape contents has been given to the Town. The field records include a table listing sewer line location, pipe size, pipe type, pipe joint spacing, surface type, total length and field observations. These records also include a television log for each sewer segment inspected by CCTV. The television log includes information such as videotape number, video start and end times, camera viewing angle (upstream or downstream), and a summary of observations. Infiltration rates for defects were visually estimated by the field personnel.

A review of the summary report prepared by Utility Pipeline Service, Inc. and the CCTV videotapes confirmed that sewer lines were constructed using Asbestos Cement Pipe (ACP). The pipelines are generally in good condition, however, several sewer segments have experienced settling, leaking joints, and/or grease/scum buildups. Mineral deposits at service connections and pipe joints were observed at several locations. These types of deposits are indications of past leakage.

Table VIII-I presents a summary of the sewer lines inspected including, subsystem reference, location, manhole identification, total segment length, defects, and estimated infiltration rates (gpd) identified by CCTV. As shown in Table VIII-I, 14 of the 43 segments (33%) did not contain any defects.

The remaining 29 segments were determined to contain miscellaneous defects. Five (5) of the 43 segments (12%) contained a defective pipe joint or service connection. The defects were located on Bunker Avenue, Main Street, Lagoon Road, Elm Street, and High Street; they were not grouped in one particular area. Infiltration rates for this type of defect ranged from 180 gpd to 1440 gpd based on observations made at the time of CCTV inspection. A total of 2,887 gpd of infiltration was attributed to defective pipe joints or service connections. Eight (8) of the 43 segments (19%) had leaks/infiltration where the pipe joined the manhole. A total of 15,480 gpd of infiltration was identified during CCTV inspection.

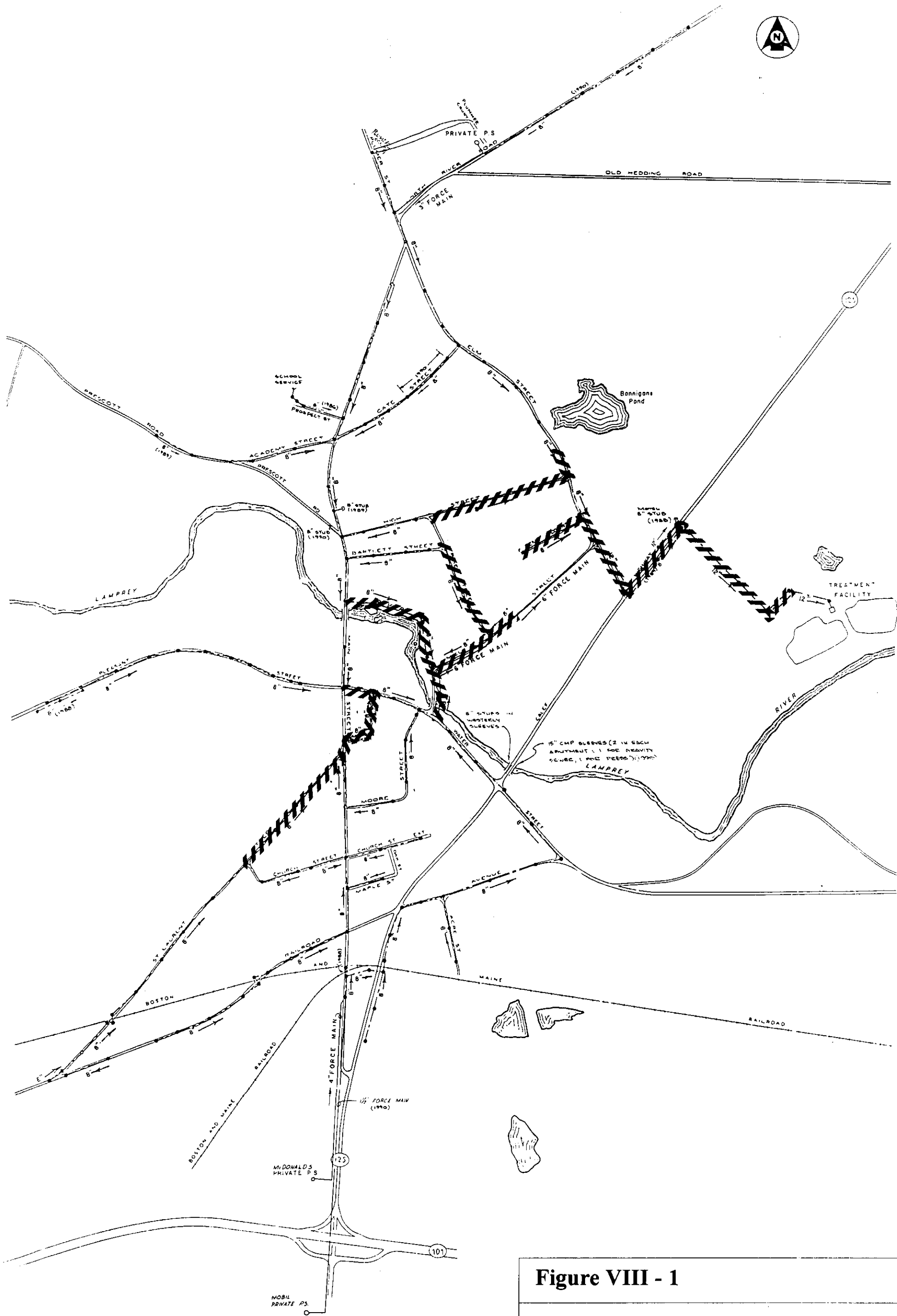
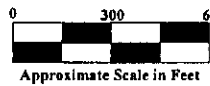


Figure VIII - 1

Sewer Lines Inspected
by Closed-Circuit Television
Mapping Prepared by: DuFresne Henry



Sverdrup

**TABLE VIII-1
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM**

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem A				
Easement between Main and Mill	3 to 2	168	No defects	0
Easement between Main and Mill	4 to 3	290	No defects	0
Easement between Main and Mill	5 to 4	343	Sag in sewer line (two locations)	0
Easement between Main and Mill	6 to 5	243	Leak at MH connection	720
Total for Subsystem		1,044		720

TABLE VIII-1 (Continued)
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem B				
Bunker Ave.	19 to 2	122	No defects	0
Main St.	2 to 3	207	Mineral deposits	0
Bunker Ave.	20 to 19	176	Leak at pipe joint	360
Bunker Ave.	20 to 21	88	No defects	0
Bunker Ave.	21 to 22	135	Camera under water due to sag	0
Main St.	23 to 22	138	Sag in sewer line, leak at pipe joint, mineral deposits	180
St. Laurent St.	24 to 23	259	Mineral deposits, sag in sewer line (two locations)	0
St. Laurent St.	25 to 24	237	Mineral deposits, sag in sewer	0
St. Laurent St.	26 to 25	230	Mineral deposits	0
St. Laurent St.	27 to 26	370	Mineral deposits	0
Total for Subsystem		1,962		540

TABLE VIII-1 (Continued)
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem C				
Railroad Ave.	6 to 5	197	No defects	0
Railroad Ave.	7 to 6	358	Sag in sewer line	0
Railroad Ave.	8 to 7	358	Mineral deposits	0
Total for Subsystem		913		0

TABLE VIII-1 (Continued)
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem D				
Mill St.	2 to 1	268	No defects	0
Mill St.	3 to 2	137	No defects	0
Mill St.	4 to 3	301	Service connection infiltration	0
Pike St.	5 to 3	302	Mineral deposits	0
Pike St.	6 to 5	223	Mineral deposits at service	0
Pike St.	7 to 6	181	No defects	0
Pike St.	8 to 7	78	No defects	0
Mill St.	1 to 1.1	80	Sag in sewer line	0
Total for Subsystem		1,570		0

TABLE VIII-1 (Continued)
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem E				
Lagoon Rd.	3 to 2	325	Leak at MH connection	1,440
Lagoon Rd.	4 to 3	223	Leak at MH connection; two locations	1,080
Lagoon Rd.	5 to 4	250	Leak at MH connection	1,440
Lagoon Rd.	6 to 5	248	Leak at MH connection; two locations and leak at hole in pipe	2,347
Lagoon Rd.	7 to 6	32	No defects	0
Lagoon Rd.	10 to 7	60	No defects	0
Calef Highway	11 to 10	165	Leak at MH connection	3,600
Calef Highway	12 to 11	205	Leak at MH connection	2,880
Calef Highway	13 to 12	212	Leak at MH connection	2,160
Elm Street	14.1 to 13	36	No defects	0

TABLE VIII-1 (Continued)
SUMMARY OF CCTV INSPECTION BY SUBSYSTEM

Subsystem/ Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Identified by CCTV
		(L.F.)		(GPD)
Subsystem E (Continued)				
Elm Street	15 to 14	160	Sag in sewer line; leak in pipe joint	720
Elm Court	16 to 15	304	Mineral deposits	0
Elm Court	17 to 16	205	Mineral deposits	0
Elm Street	22 to 18	156	No defects	0
High Street	19 to 18	307	Mineral deposits, sag in sewer line	0
High Street	20 to 19 (1)	355	Leak at hole in pipe, mineral deposits	1,440
High Street	21 to 20	344	Mineral deposits	0
Elm Street	14 to 14.1	367	No defects	0
Total for Subsystem		3,954		17,107
Total for All Subsystems		9,443		18,367

(1) Infiltration flow not listed in Utility Pipeline Summary Report - Estimated potential infiltration flow rate of 1 gpm.

Nine (9) of the 43 segments (21%) throughout the study area contained sags. Three (3) sewer segments contained multiple sags. The pipelines developed low points due to settlement. No infiltration was directly attributable to the sags, however, several pipelines containing sags also had mineral deposits, indicating that infiltration may have occurred in the past, and may be a future concern. The sags adversely affect hydraulic operation and maintenance of the sewer system.

Fourteen (14) of the 43 segments (33%) contained mineral deposits. Mineral deposits indicate locations of previous leakage. Although no infiltration was observed at these locations at the time of CCTV inspection, these defects may be considered potential sources of infiltration.

IX. SUMMARY OF INFILTRATION AND INFLOW POTENTIAL

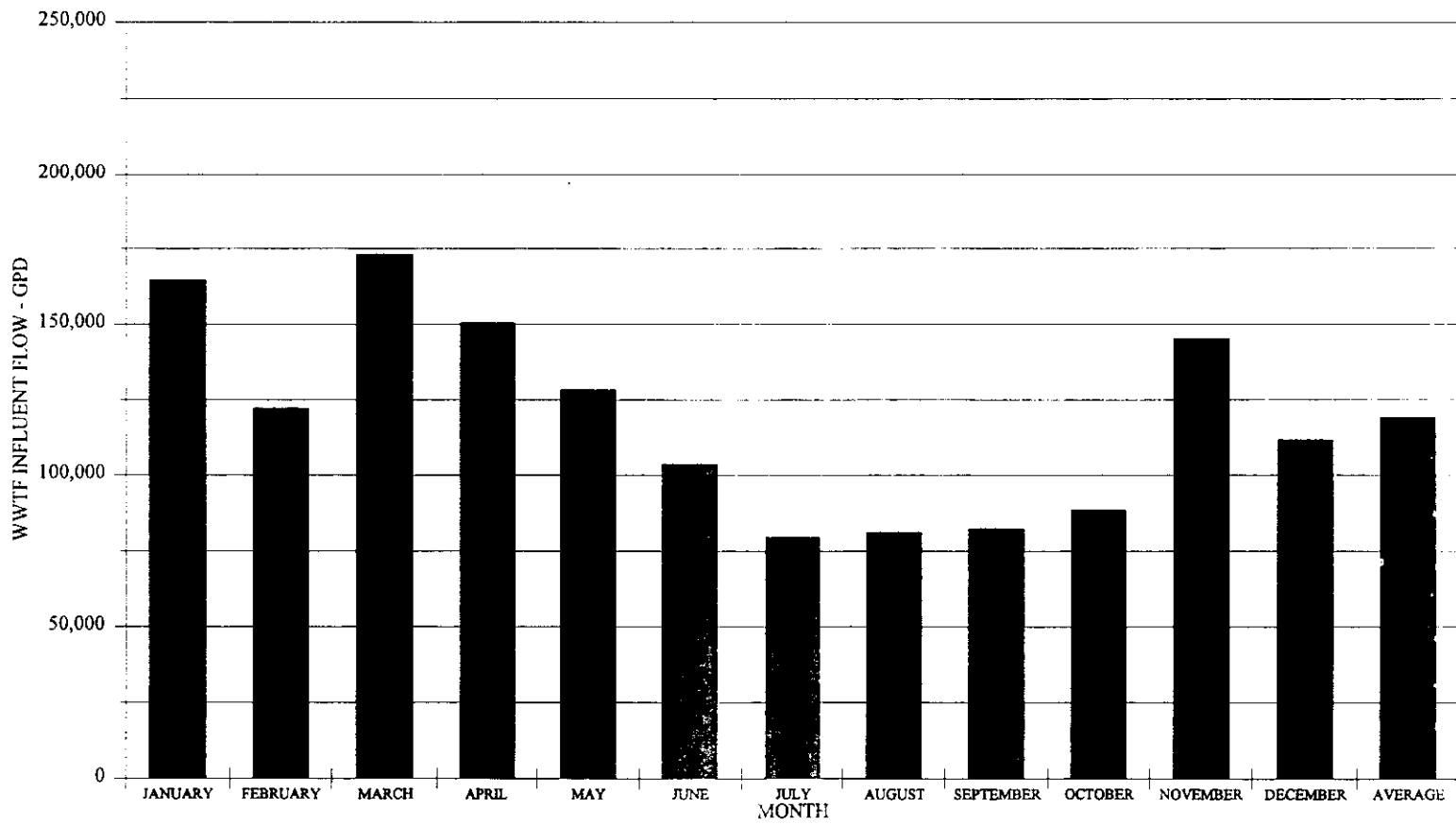
The smoke testing, dyed water testing, and house-to-house inspections confirmed that the area of the Epping wastewater collection system studied does not have a significant problem at this time with direct inflow connections. Direct inflow connections are those that cause an immediate increase in flow to the wastewater treatment plant while a storm event is ongoing. However, the types of defects identified by flow isolation testing, manhole inspections, and CCTV inspections show that infiltration into the collection system does occur. In addition, discussions with the wastewater treatment plant operator and a review of the wastewater treatment plant flow records, indicates the rate of infiltration increases soon after rain events. This type of response to rain events is often referred to as rainfall induced infiltration. Rainfall induced infiltration causes an increased flow to the wastewater treatment plant, but the peak from this type of flow is usually delayed until after the storm event has passed, often one or more days after the storm is over. Similar findings were reported in a previous study (D-H, 1980).

For this study, an estimate of average annual I/I was prepared by evaluating the 1995 wastewater flow records provided by the Town. Figure IX-1 shows the average monthly flows to the wastewater treatment plant over that period. During that year, the average daily wastewater flow to the wastewater treatment plant was about 123,000 gpd. The minimum daily flows of about 81,000 gpd occurred in August, and this daily flow was assumed to be a good approximation of the community's baseline sanitary wastewater flow (i.e., flows not including contributions from I/I). During the month of August, groundwater levels were assumed to be at their lowest, and only minimal amounts of infiltration would be expected. With these assumptions made, the total annual I/I was estimated by comparing the difference between the estimated baseline sanitary wastewater flow (81,000 gpd) and the monthly flowrates of 1995. By this method, the average annual I/I in 1995 was about 42,000 gpd.

The current estimates of wastewater flow and average annual I/I were compared with estimates included in previous studies. In 1980, the average daily wastewater flow and the average annual I/I were estimated at 107,200 gpd and 32,000 gpd, respectively (D-H, 1980). From 1980 to 1995, the average daily wastewater flow to the wastewater treatment plant has increased approximately 12.15 percent (12%) from 107,200 gpd to 120,000 gpd. During the same period, the average annual I/I into the collection system has increased about 32 percent (32%) from 32,000 gpd to 42,000 gpd. Based on this comparison, the average annual I/I rate appears to be increasing faster than the average daily wastewater flow.

The I/I rates identified for this study imply that it may be cost effective to remove some extraneous infiltration rather than to continue transporting and treating. In 1980, it was found that the amount of I/I should exceed 2,900 gpd/inch-mile before such I/I could be considered excessive, and therefore, cost effective to eliminate. As shown in Table VI-1, the system-wide infiltration rate measured for this study (2,720 gpd/inch-mile) suggests the collection system is approaching, and some sections have exceeded, the rate of I/I where it is becoming cost effective to remove. The cost effectiveness of removing I/I is discussed in more detail in Section X.

FIGURE IX-1
AVERAGE MONTHLY FLOW (GPD) - 1995



X. REHABILITATION METHODS AND COST ESTIMATES

A. Typical Rehabilitation Methods

The amount and type of rehabilitation proposed is based upon the findings of the physical survey and inspection program. The details of these findings and the recommended type and amount of rehabilitation is discussed in greater detail below. In order to effectively reduce I/I, it may be necessary to rehabilitate both pipelines and manholes. The following is a review of typical rehabilitation methods.

1. Pipeline Rehabilitation Methods

Several pipeline rehabilitation methods are typically considered. These methods are listed as follows:

- Excavation and Replacement
- Sliplining
- Cured in Place Pipe (CIPP)
- Chemical Grouting
- Other Rehabilitation Methods

The following is a brief description of each method of rehabilitation method.

a. Excavation and Replacement

This method requires the excavation and removal of the defective sewer sections and replacement with new ones, or construction of a new line parallel to the defective pipe. This is usually the most expensive method of rehabilitation as most of the sewers are in roadways and may require the removal and replacement of pavement, disruption of traffic, trench dewatering, maintenance of sewage flow, shoring, and potential interference with adjacent utilities and underground structures. This method is used when one or more of the following conditions exist:

1. Sewers and/or manholes have lost their structural integrity, i.e., they are broken, crushed or badly deteriorated.
2. Where sewer enlargement, or grade and/or alignment change is necessary.
3. Where replacement of sewerage material is required to prevent recurrence of structural damage.

The cost of excavation and replacement can vary considerably due to the diameter of pipe, depth of the trench, type of pavement and location of the sewer. For example, a small diameter sewer in a shallow trench in a given residential street will cost considerably less to replace than a pipe of equal or greater diameter in a deeper trench in a busy street.

b. Sliplining

Sliplining, sometimes referred to as pipe insertion, is the pulling of a polyethylene pipe through a straight section of sewer line to provide a new inner lining for the existing pipe. This method is used when the existing sewer has a large number of leaking joints or cracked pipes. However, for this method to be used, the pipe must still have structural integrity. If the existing sewer is crushed or sags exist between manholes, this method does not apply.

The technique involves joining polyethylene pipe sections aboveground to a desired length to span from manhole to manhole. Joints are formed by heating and joining ends. The resulting fused joints are strong and waterproof. The assembled pipe is then pulled through the existing sewer. Grout is used to seal the annular space at each manhole. The entire length of annular space between manholes may be grouted, if necessary, or if greater strength is desired.

The resulting sewer will have a smaller diameter than the original sewer. However, capacity of the lined pipe may be equal or better than the old pipe due to lower friction resistance offered by the smooth liner. Other advantages to this rehabilitation method are low leakage rates due to the butt weld joints, corrosion and abrasion resistance and flexibility. This method is useful when excavation is difficult or undesirable; it is also used for sewers with massive root problems or corrosive flows.

There are a number of different liners available that fall under the heading of sliplining. These include Drawdown Liners, Deformed and Reshaped Liners and Segmented Liners.

Service connections to the new inner sewer can be made without excavation by the use of remote controlled cutting tools or flexible core drills. The service lateral can also be lined using segmented liners. This involves a small excavation at the property line to expose the lateral and allow for the insertion of the sections of segmented liner. After the lateral is lined, a core drill follows to reactivate the service lateral connection to the main sewer.

c. Cured in Place Pipe (CIPP)

Cured in Place Pipe (CIPP) is a lining process that produces a pipe within a pipe. In the CIPP process, a flexible liner made of a woven or nonwoven fabric and manufactured into a tube is impregnated with a thermosetting resin, introduced into the pipe to be rehabilitated and then cured to form the pipe within a pipe.

Prior to this type of reconstruction, the sewer line is cleaned and inspected to be sure it is properly prepared for the lining process. A variety of cleaning methods can be employed, depending on the size and type of pipe and the characteristics and amount of debris or other foreign material that is present in the sewer. Most sewers can be cleaned by the use of high pressure jetting equipment. In instances of an accumulation of heavier amounts of debris, it may be necessary to use a hydraulically propelled cleaning head. Still heavier debris may

require the use of buckets to remove and in extreme cases, excavation may be necessary to remove obstruction.

Before installation, the liner is saturated with the thermosetting resin. The flexible liner is fed into the defective pipe through the manhole. The installation varies depending upon the CIPP process used. Once the liner is in place, water under pressure pushes it against the host pipe and holds it in what will become the permanent position. The water pumped into the liner is heated, and this causes the resin to cure. This curing process takes several hours during which time, sewage is pumped around the construction area. Closed circuit television and a remote controlled cutting tool within the new pipe are used to reopen service connections.

The advantages of the CIPP method are the following: no extensive excavation required; less room is needed than for conventional sliplining; improved flow characteristics; minimal diameter reduction; and the CIPP can fit all shapes of conduit.

There are a number of processes and firms that provide the CIPP, including: Inliner, U.S.A., Insituform, KM Liner and Superliner. Liner materials and thermosetting systems vary considerably and can be tailored for any particular application. Most CIPP processes pull the liner in place through a manhole with the aid of a cable and winch. Insituform utilizes the inversion process of liner installation. In this process, a tower and inversion standpipe is erected over a manhole or other access point. Water from a convenient source is used to fill the inversion standpipe. The force of the column of water pushes the liner inside-out, termed inversion, and into the pipe being reconstructed.

d. Chemical Grouting

Chemical grouting is a technique used to seal leaking joints and circumferential cracks in otherwise structurally sound pipe so that it is impervious to water.

The two chemical grouts commonly used are acrylamide gel and polyurethane foam. The acrylamide gel stops leaks by decreasing the permeability of the soil. The polyurethane foam seals leaks by injecting the grout into the pipe opening thereby forming a barrier.

Limitations to grout sealing:

1. Gel grout repairs cannot be used as a structural repair for broken, crushed or badly cracked pipes.
2. The effectiveness of gels may be reduced in soils containing large interstices unless measures are taken to remedy the situation.
3. May not be effective on a pipe that is not properly supported.

Chemical grouts are normally applied to joints and cracks under pressure after appropriate cleaning and testing of the substrate surface. The grout is applied internally within a sewer

and thus does not damage or interfere with other utilities or facilities. This method does not require excavation or site restoration.

The cost of chemical grouting varies with sewer diameter, and quality and quantity of cracks and/or joints that require sealing.

Past experience with chemical grouting to remove infiltration indicates removal rates of 50 to 70 percent and a limited life span (5 years).

e. Other Rehabilitation Methods

New rehabilitation methods are continually being developed, especially in the area of "Trenchless Technology." These new technologies should be considered when contemplating rehabilitation work. One of these methods is "Sanipor." The Sanipor System is described only as an example of new technologies being developed.

The Sanipor System is a system that claims to seal leaks in mains, manholes and service laterals without excavation. After the sewer is cleaned, a sodium silicate solution is pumped into the sewer filling the main, manhole and laterals. The solution is subject to a 3-5 foot head above groundwater, and fills the cracks and defects in the system. The solution is pumped out and a second solution of reactive silica, ester and acidic components is immediately pumped in and reacts with the remains in the ground of the first solution to form a hard non-porous matrix outside the pipe which will prevent infiltration and exfiltration. The solution is pumped out of the sewer and can be used again in other areas to be rehabilitated.

The manufacturers claim that the solutions are environmentally friendly and contain only biodegradable and nontoxic chemicals.

2. Manhole Rehabilitation

Manhole rehabilitation can be accomplished by a number of methods depending on the defects. Defects which can cause infiltration include deep cracks, surface and joint deterioration in the manhole walls, bench and invert deterioration, as well as defective pipe seals. Inflow may enter the manhole through deterioration, as well as defective pipe seals. Inflow may enter the manhole through deterioration of the frame and cover and/or its seal with the manhole chimney, and direct connections from storm drain systems. Deteriorated frames, covers and chimneys should be replaced and the seal between the new frame and the chimney made watertight.

Repairs to manhole walls are usually accomplished by application of a cementitious layer or epoxy lining. In all cases, active water leaks must be stopped before applying a liner to the walls. There are several lining materials and costs can vary widely. Some liners offer restoration of structural integrity while others do not. Manhole repairs should be considered on a case by case basis.

B. Estimated Costs for Transport and Treatment

One objective of this study was to determine whether the infiltration and inflow identified by this study represents an excessive amount of extraneous wastewater flow. Excessive infiltration and inflow is defined as the amount of I/I that is more cost effective to remove from the collection system through rehabilitation than to continue transporting and treating at the treatment plant. Therefore, the cost effectiveness of rehabilitating sections of the Town's collection system depends on a comparison of the costs to transport and treat the I/I against the costs to rehabilitate.

In the case of Epping, the transport and treat (T&T) costs are expected to increase substantially in the near future. This increase will be due to the new upgraded treatment processes that will be required to meet the more stringent NPDES Permit effluent limitations. Therefore, a reasonable analysis for evaluating the cost-effectiveness of rehabilitating the collection system should be based on a comparison using the best estimates of anticipated costs of T&T at the upgraded treatment plant. Information provided by the Town was used for this analysis.

The current operating budget along with estimates of incremental increases to these costs for an upgraded wastewater treatment plant have been used to develop T&T costs for Epping's system. The current operating budget for the existing wastewater treatment plant and collection system is approximately \$125,000. The Town has received preliminary estimates of the additional operating and maintenance costs for the upgraded facility. These costs may range from a low of \$48,000 to more than \$110,000 per year. These estimates are widely unknown at this time until a design is selected for the upgraded plant. The actual cost of the operation and maintenance will depend largely on the type of treatment process selected for construction. Because of the uncertainty, both values of incremental operation and maintenance costs have been used to estimate the cost of T&T. On the low end, the estimated T&T cost with the upgraded treatment facility on-line will be \$173,000 per year, and on the high end, the T&T costs will be \$235,000 per year.

Assuming the current average annual wastewater flow to the treatment plant of 123,000 gpd, the average cost of T&T was assumed to range between \$1.41/gpd up to \$1.90/gpd. When the cost to rehabilitate a sewer segment, measured as the cost to rehabilitate per gallon of I/I removed per day, is less than \$1.90/gpd, then the rehabilitation alternative is considered cost effective.

C. Estimated Unit Costs for Selected Rehabilitation Alternatives

The unit cost for rehabilitation depends on the alternative selected for rehabilitation. Table X-1 contains estimated unit costs for removing typical sources of inflow, such as sump pumps and area drains. Table X-2 contains estimated unit costs for removing infiltration from sewer segments and manholes.

TABLE X-1
TYPICAL INFLOW SOURCES, POSSIBLE REHABILITATION
ALTERNATIVES AND ASSOCIATED UNIT COSTS

Sources	Possible Rehabilitation Alternatives	Unit Costs
Roof leader connections.	Disconnection and flow redirection.	\$357/connection.
Foundation drains.	Disconnection and flow redirection.	\$857/drain.
Sump pumps.	Disconnection and flow redirection.	\$536/occurrence.
Basement drains.	Disconnection and flow redirection.	\$857/drain.
Yard drains.	Disconnection, plugging, and flow redirection.	\$857/drain.
Area drains.	Disconnection, plugging, and flow redirection.	\$857/drain.
Driveway drains.	Disconnection and flow redirection.	\$857/drain.
Cleanouts.	Sealing.	\$72/cleanout.
Service line leaks.	ILR ⁽¹⁾ service line.	\$1,785/service line.

(1) ILR - In-Line Rehabilitation

TABLE X-2
INFILTRATION REHABILITATION ALTERNATIVES AND ASSOCIATED
UNIT COSTS

CHEMICAL GROUTING

Pipe Diameter =	8"	12"
Cleaning and CCTV Inspection \$/LF	\$1.50	\$1.50
Grouting \$/LF (13 ft joint spacing)	\$1.75	\$2.00
Total Repair \$/LF	\$3.25	\$3.50

CURED IN PLACE PIPE (CIPP) *
FOR PAVED/GRASSY AREAS - \$/LF

Pipe Diameter =		8"	12"
Length	Depth		
ANY	ANY	\$72	\$108

* MUST CUT PROTRUDING SERVICE LINES PRIOR TO ILR @ \$1500 PER PROTRUDING SERVICE LINE.

MANHOLE REHABILITATION

Manhole Rehabilitation \$/VLF	\$100 per vertical linear foot
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Inflow sources are identified during smoke testing and building inspections. As discussed in Section IV, the smoke testing work did not uncover any significant inflow sources throughout the entire collection system. However as discussed in Section III, the building inspections found several sump pumps connected directly to the sewer system, but these sumps are privately owned. Since the Town is not expected to be required to pay for removal of these private inflow sources, the cost effectiveness of removing them was not considered in this study. These illegal connections should be removed by the property owners to comply with the Town's sewer use regulations.

As discussed in Section VIII, the CCTV Inspection findings of this study did not uncover any sewer segments that were not structurally sound. No severely collapsed or crushed pipes were identified. Therefore, the alternative of excavating and replacing sewer segments is not needed to correct any defect.

Several sewer segments showed signs of settlement, which resulted in a sagging sewer line. This condition is typically caused by poor subbase preparation during construction. The alternative selected to repair this type of defect is the CIPP. This rehabilitation method is able to add structural strength to the sewer line and can be installed in pipe segments that have settled. Unit costs for this work were obtained from a local sales representative of this process who provided budgeting estimates for 8-inch and 12-inch diameter pipelines. A 20% contingency allowance has been added to account for engineering fees and construction allowances.

Other sewer segments were found to have high infiltration during the flow isolation work, and during CCTV inspection, these segments showed mineral deposit buildups at several joints along the segment. For these segments, which remain structurally sound, the recommended alternative is chemical grouting of the joints. In these cases, grouting of all joints in the section between adjacent manholes is recommended. This recommendation was made to reduce the possibility of infiltration migrating from one joint that may be repaired to another joint that was not repaired. Often by repairing only one joint defect, the local groundwater levels will rise, and this may cause an adjacent joint to begin leaking or leak at a higher rate. Unit costs for chemical grouting of pipeline joints were provided by Utility Pipeline Services, Inc. (UPSI), who frequently collect cost data on rehabilitation methods to prepare cost estimates for similar studies.

For those manholes that showed infiltration at the connection between the manhole and the sewer line, the recommended alternative is manhole rehabilitation. Unit costs for manhole rehabilitation are based on budgeting estimates provided by UPSI.

D. Recommended Rehabilitation Alternatives

The data from the flow isolation, CCTV inspection, and manhole inspections was used to recommend rehabilitation alternatives. As discussed earlier, the sewer segments chosen for CCTV and manhole inspection were selected because flow isolation data showed these segments have the highest amounts of infiltration. The CCTV data was used to determine

those sewer segments with defects, such as sagging lines or mineral deposits at joints. The manhole inspection data provided information on those manholes that showed poor connections between the manhole and sewer lines. Segments that did not show defects were considered sound and further rehabilitation was not recommended.

Once specific sewer segments with defects were identified, the flow isolation data collected in April was used to assign removable rates of infiltration to each defect. The removable infiltration rates were used, as discussed below, to estimate the reduction in infiltration throughout the collection system when the recommended repairs are implemented. In cases where flow isolation was completed on reaches that spanned several manholes, the infiltration measured during the flow isolation work was assigned to only those manhole-to-manhole segments with defects. For example, as shown in Table VI-2, flow isolation found the sewer segments between manholes 6 and 2 in Subsystem A had 5,040 gpd infiltration. However, as shown in Table VIII-1, CCTV inspection found the segments between manholes 2 to 3 and 3 to 4 had no defects. Therefore, the 5,040 gpd of infiltration was assigned to the remaining two reaches between manholes 6 and 4. The total amount of infiltration was split between manhole reach 6 to 5 and reach 5 to 4 in proportion to the length of each segment to the total length. Continuing with the example, the total length from manhole 6 to 4 is 586 LF, which includes 243 LF from manhole 6 to 5 and 343 LF from manhole 5 to 4. Therefore, 2,090 gpd was assigned to the reach between manholes 6 and 5 and the difference, or 2,950 gpd, was assigned to the reach between manholes 5 and 4.

Table X-3 summarizes the sewer segments recommended for rehabilitation. In this table, sewer segments are grouped by Subsystem. The in-line rehabilitation techniques recommended are either CIPP or chemical grouting. The total estimated cost for the rehabilitation is shown as well as the cost of rehabilitation per gpd removed. In most cases the cost to rehabilitate per gpd removed using chemical joint grouting is less than the T&T cost (which ranges between \$1.41/gpd and \$1.90/gpd), but the cost to rehabilitate per gpd removed using CIPP is greater than the T&T cost.

Table X-4 summarizes by Subsystem the manholes recommended for rehabilitation. Rehabilitation would include repairing the connection between the manhole and all sewer lines connected to the manhole. In all cases, the cost to rehabilitate manholes would be less than the T&T cost.

Table X-5 prioritizes the combination of sewer segments and manholes recommended for rehabilitation. This table is sorted by Subsystem and shows the most cost effective repairs first. Chemical grouting and manhole rehabilitation are the most cost effective repairs. When considered as a whole, the total cost of repairs is cost effective when compared against the higher T&T cost. That is, the total cost of the repairs, including CIPP, chemical grouting of joints, and manhole rehabilitation, is estimated to remove a maximum of 88,470 gpd for a cost of \$1.87 per gpd. This is less than the \$1.90/gpd T&T cost estimated for the high end of an upgraded wastewater treatment plant. Using the low T&T cost of \$1.41/gpd, repair of all defects would be about 33% more expensive than continuing to transport and treat this infiltration.

**TABLE X-3
SEWER REHABILITATION RECOMMENDATIONS**

Subsystem/Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD Recovered
		(L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem A								
Easement between Main and Mill	5 to 4	343	Sag in sewer line (two locations)	2,950	CIPP	\$72.00	\$24,696.00	\$8.37
Subsystem B								
Main St.	2 to 3	207	Mineral deposits	4,320	Chemical Grouting	\$3.25	\$672.75	\$0.16
Bunker Ave.	20 to 19	176	Leak at pipe joint	3,387	Chemical Grouting	\$3.25	\$572.00	\$0.17
Bunker Ave.	21 to 22	135	Camera under water due to sag	2,598	CIPP	\$72.00	\$9,720.00	\$3.74
Main St.	23 to 22	138	Sag in sewer line, leak at pipe joint, mineral deposits	2,656	CIPP	\$72.00	\$9,936.00	\$3.74
St. Laurent St.	24 to 23	259	Mineral deposits, sag in sewer line (two locations)	1,656	CIPP	\$72.00	\$18,648.00	\$11.26
St. Laurent St.	25 to 24	237	Mineral deposits, sag in sewer	1,515	CIPP	\$72.00	\$17,064.00	\$11.26
St. Laurent St.	26 to 25	230	Mineral deposits	1,470	Chemical Grouting	\$3.25	\$747.50	\$0.51
St. Laurent St.	27 to 26	370	Mineral deposits	2,365	Chemical Grouting	\$3.25	\$1,202.50	\$0.51
Total by Subsystem		1,752		19,966			\$58,563	\$2.93
Subsystem C								
Railroad Ave.	7 to 6	358	Sag in sewer line	2,880	CIPP	\$72.00	\$25,776.00	\$8.95
Railroad Ave.	8 to 7	358	Mineral deposits	2,880	Chemical Grouting	\$3.25	\$1,163.50	\$0.40
Total by Subsystem		716		5,760			\$26,940	\$4.68

TABLE X-3 (Continued)
SEWER REHABILITATION RECOMMENDATIONS

Subsystem/Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD Recovered
		(L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem D								
Mill St.	4 to 3	301	Service connection infiltration	1,440	Chemical Grouting	\$3.25	\$978.25	\$0.68
Pike St.	5 to 3	302	Mineral deposits	2,485	Chemical Grouting	\$3.25	\$981.50	\$0.39
Pike St.	6 to 5	223	Mineral deposits at service	1,835	Chemical Grouting	\$3.25	\$724.75	\$0.39
Mill St.	1 to 1.1	80	Sag in sewer line	4,320	CIPP	\$72.00	\$5,760.00	\$1.33
Total by Subsystem		906		10,080			\$8,445	\$0.84
Subsystem E								
Elm Street	15 to 14	160	Sag in sewer line, leak in pipe joint	720	CIPP	\$72.00	\$11,520.00	\$16.00
Elm Court	16 to 15	304	Mineral deposits	3,386	Chemical Grouting	\$3.25	\$988.00	\$0.29
Elm Court	17 to 16	205	Mineral deposits	2,284	Chemical Grouting	\$3.25	\$666.25	\$0.29
High Street	19 to 18	307	Mineral deposits, sag in sewer line	4,007	CIPP	\$72.00	\$22,104.00	\$5.52
High Street	20 to 19	355	Leak at hole in pipe, mineral deposits	4,633	Chemical Grouting	\$3.25	\$1,153.75	\$0.25
High Street	21 to 20	344	Mineral deposits	4,490	Chemical Grouting	\$3.25	\$1,118.00	\$0.25
Total by Subsystem		1,675		19,520			\$37,550	\$1.92
Total for All Subsystems		5,392		58,276			\$156,193	\$2.68

**TABLE X-4
MANHOLE REHABILITATION RECOMMENDATIONS**

Subsystem/Roadway Location	MH	MH Depth	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD
		(V.L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem A								
Easement between Main and Mill	5	6.5	Leak at MH connection	2,090	Manhole Rehabilitation	\$100.00	\$650.00	\$0.31
Subsystem E								
Lagoon Rd.	2	8.5	Leak at MH connection	3,356	Manhole Rehabilitation	\$100.00	\$850.00	\$0.25
Lagoon Rd.	4	15.75	Leak at MH connection; two locations	2,302	Manhole Rehabilitation	\$100.00	\$1,575.00	\$0.68
Lagoon Rd.	5	14.25	Leak at MH connection	2,581	Manhole Rehabilitation	\$100.00	\$1,425.00	\$0.55
Lagoon Rd.	6	14	Leak at MH connection; two locations and leak at hole in pipe	2,561	Manhole Rehabilitation	\$100.00	\$1,400.00	\$0.55
Calef Highway	10	13	Leak at MH connection	4,495	Manhole Rehabilitation	\$100.00	\$1,300.00	\$0.29
Calef Highway	12	10.25	Leak at MH connection	5,585	Manhole Rehabilitation	\$100.00	\$1,025.00	\$0.18
Calef Highway	13	8	Leak at MH connection	5,776	Manhole Rehabilitation	\$100.00	\$800.00	\$0.14
Total for Subsystem				26,656			\$8,375.00	\$0.31
Total for All Subsystems				28,746			\$9,025.00	\$0.31

TABLE X-5
SEWER AND MANHOLE REHABILITATION RECOMMENDATIONS
By Increasing \$/GPD Recovered for each Subsystem

Subsystem/Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD Recovered
		(L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem A								
Easement between Main and Mill	5	243	Leak at MH connection	2,090	Manhole Rehabilitation	\$100.00	\$650.00	\$0.31
Easement between Main and Mill	5 to 4	343	Sag in sewer line (two locations)	2,950	CIPP	\$72.00	\$24,696.00	\$8.37
Total by Subsystem		586		5,040			\$25,346.00	\$5.03
Subsystem B								
Main St.	2 to 3	207	Mineral deposits	4,320	Chemical Grouting	\$3.25	\$672.75	\$0.16
Bunker Ave.	20 to 19	176	Leak at pipe joint	3,387	Chemical Grouting	\$3.25	\$572.00	\$0.17
St. Laurent St.	27 to 26	370	Mineral deposits	5,347	Chemical Grouting	\$3.25	\$1,202.50	\$0.22
St. Laurent St.	26 to 25	230	Mineral deposits	3,324	Chemical Grouting	\$3.25	\$747.50	\$0.22
Main St.	23 to 22	138	Sag in sewer line, leak at pipe joint, mineral deposits	2,656	CIPP	\$72.00	\$9,936.00	\$3.74
Bunker Ave.	21 to 22	135	Camera under water due to sag	2,598	CIPP	\$72.00	\$9,720.00	\$3.74
St. Laurent St.	24 to 23	259	Mineral deposits, sag in sewer line (two locations)	3,743	CIPP	\$72.00	\$18,648.00	\$4.98
St. Laurent St.	25 to 24	237	Mineral deposits, sag in sewer	3,425	CIPP	\$72.00	\$17,064.00	\$4.98
Total by Subsystem		1,752		28,800			\$58,562.75	\$2.03

TABLE X-5 (Continued)
SEWER AND MANHOLE REHABILITATION RECOMMENDATIONS
By Increasing \$/GPD Recovered for each Subsystem

Subsystem/Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD Recovered
		(L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem C								
Railroad Ave.	8 to 7	358	Mineral deposits	4,320	Chemical Grouting	\$3.25	\$1,163.50	\$0.27
Railroad Ave.	7 to 6	358	Sag in sewer line	4,320	CIPP	\$72.00	\$25,776.00	\$5.97
Total by Subsystem		716		8,640			\$26,939.50	\$3.12
Subsystem D								
Pike St.	6 to 5	223	Mineral deposits at service	1,835	Chemical Grouting	\$3.25	\$724.75	\$0.39
Pike St.	5 to 3	302	Mineral deposits	2,485	Chemical Grouting	\$3.25	\$981.50	\$0.39
Mill St.	4 to 3	301	Service connection infiltration	1,440	Chemical Grouting	\$3.25	\$978.25	\$0.68
Mill St.	1 to 1.1	80	Sag in sewer line	4,320	CIPP	\$72.00	\$5,760.00	\$1.33
Total by Subsystem		906		10,080			\$8,444.50	\$0.84

TABLE X-5 (Continued)
SEWER AND MANHOLE REHABILITATION RECOMMENDATIONS
 By Increasing \$/GPD Recovered for each Subsystem

Subsystem/Roadway Location	MH to MH	Total Segment Length	Defects Identified by CCTV	Infiltration Rate Recovered	Recommended Repair Method	Unit Rehabilitation Cost	Total Cost	Cost per GPD Recovered
		(L.F.)		(GPD)		(\$/L.F.)	(\$/Repair)	(\$/GPD)
Subsystem E								
Calef Highway	13	212	Leak at MH connection	3,672	Manhole Rehabilitation	\$100.00	\$800.00	\$0.22
Lagoon Rd.	2	325	Leak at MH connection	3,356	Manhole Rehabilitation	\$100.00	\$850.00	\$0.25
Calef Highway	12	205	Leak at MH connection	3,551	Manhole Rehabilitation	\$100.00	\$1,025.00	\$0.29
Elm Court	17 to 16	205	Mineral deposits	2,284	Chemical Grouting	\$3.25	\$666.25	\$0.29
Elm Court	16 to 15	304	Mineral deposits	3,386	Chemical Grouting	\$3.25	\$988.00	\$0.29
High Street	20 to 19	355	Leak at hole in pipe, mineral deposits	3,049	Chemical Grouting	\$3.25	\$1,153.75	\$0.38
High Street	21 to 20	344	Mineral deposits	2,954	Chemical Grouting	\$3.25	\$1,118.00	\$0.38
Calef Highway	10	165	Leak at MH connection	2,858	Manhole Rehabilitation	\$100.00	\$1,300.00	\$0.45
Lagoon Rd.	6	248	Leak at MH connection; two locations and leak at hole in pipe	2,561	Manhole Rehabilitation	\$100.00	\$1,400.00	\$0.55
Lagoon Rd.	5	250	Leak at MH connection	2,581	Manhole Rehabilitation	\$100.00	\$1,425.00	\$0.55
Lagoon Rd.	4	223	Leak at MH connection; two locations	2,302	Manhole Rehabilitation	\$100.00	\$1,575.00	\$0.68
High Street	19 to 18	307	Mineral deposits, sag in sewer line	2,637	CIPP	\$72.00	\$22,104.00	\$8.38
Elm Street	15 to 14	160	Sag in sewer line; leak in pipe joint	720	CIPP	\$72.00	\$11,520.00	\$16.00
Total by Subsystem		3,303		35,910			\$45,925.00	\$1.28
Total for All Subsystems				88,470			\$165,217.75	\$1.87

Overall, the total length of sewer segments recommended for rehabilitation in Table X-5 is 5,392 feet, including 2,017 feet for rehabilitation by CIPP, and 3,375 feet for rehabilitation by chemical joint grouting. A total of eight (8) manholes are recommended for repair within the sewer segments having the highest anticipated infiltration. The Town may want to consider including repair of several other manholes, which were identified with defects as discussed earlier, but which were not located in the areas of highest infiltration. These low cost repairs would reduce infiltration and help keep the collection system in good condition. Also, since many of the manhole defects can be easily repaired, the Town's wastewater treatment plant staff could make these repairs as part of a routine collection system maintenance and inspection program.

When sufficient funds for collection system repairs are available, the Town should rehabilitate sewer segments in the highest infiltration areas with the appropriate combination of CIPP, chemical grouting, and manhole rehabilitation. Data summarized in Table X-5 shows that, in each instance, the cost of CIPP repair is greater than the cost to continue transporting and treating the infiltration. However, lower repair costs for chemical grouting and manhole rehabilitation can drive down the overall cost per gpd of infiltration removed from the collection system to below the T&T cost. The combination will provide the benefit of low cost repairs such as manhole rehabilitation and chemical grouting along with the longer lasting repairs such as CIPP.

CIPP has definite advantages that should be considered for certain sewer segments. CIPP repairs, though more expensive, will provide a more permanent solution for removing infiltration than the chemical grouting and manhole rehabilitation methods. This is in part because the CIPP repair will add structural strength to the defective sewer segment, which chemical grouting of joints will not provide. Another benefit of CIPP is that it essentially forms a continuous pipeline that will not corrode and has no intermediate joints where groundwater can infiltrate. Such a continuous pipeline will help reduce the potential for infiltration to migrate to adjacent joints because of higher groundwater levels. Also, for a given segment of sewer to be repaired, CIPP will keep a larger quantity of infiltration out of the collection system than other repairs to the same segment. This can be especially important for those sewer segments where groundwater levels are above the crown of the sewer line throughout the year. In these instances, CIPP repair will be a better long-term solution. For example, CIPP would be a better rehabilitation method for sewer lines located adjacent to the Lamprey River or other areas with high groundwater levels, even though the sewer line may show only joint deterioration. This is because the CIPP will keep more infiltration out of the collection system for a longer period of time than chemical grouting and will reduce migration of infiltration to adjacent joints.

The information discussed previously can be used to estimate the average annual reduction in I/I if all of the repairs listed in Table X-5 are implemented. The average annual reduction in I/I for the entire collection system will be less than the maximum infiltration removal of 88,470 gpd that was estimated using the flow isolation data. As shown in Table VI-1, the

baseline infiltration for the entire collection system was estimated at 160,560 gpd. Since this infiltration was measured during the high groundwater months, this rate can be considered an estimate of the peak infiltration rate throughout the entire collection system. Also, because inflow does not represent a large quantity of annual flow to the wastewater treatment plant, the peak rate of infiltration can also be assumed to represent the peak rate of I/I. The annual average I/I rate for the collection system was estimated previously to be 42,000 gpd. Therefore, the ratio of peak to annual average I/I is estimated to be 3.7. Using this ratio and the maximum infiltration of 88,470 gpd removed if the repairs listed in Table X-5 are made, the average annual reduction in I/I resulting from these repairs would be about 24,000 gpd. Therefore, almost 45% of the average annual I/I may be removed from the collection system if the recommended repairs are made.

XI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Based on the results of this Infiltration/Inflow and Sewer System Evaluation Survey study, the following conclusions are made:

1. The wastewater collection system for the Town of Epping is in relatively good condition in that all of the segments tested are structurally sound. None of the sewer lines inspected by CCTV were broken or crushed, and cleaning of the lines did not indicate excessive amounts of debris accumulating throughout the system. Therefore, the most disruptive and costly rehabilitation technique of excavation and replacement is not required for those lines studied.
2. Current I/I rates have increased approximately 32% from 32,000 gpd in 1980 to 42,000 gpd today. Over the same time period, wastewater flows have increased only 15%. Therefore, I/I is increasing at a faster rate than wastewater flows.
3. Based on the data collected and analyzed for this report, 29 specific sewer defects have been prioritized for repair by comparing the cost to rehabilitate them against the cost to continue transporting and treating the infiltration at the wastewater treatment plant. The cost to complete these repairs has been estimated to total about \$166,000. The repairs would remove up to 45% of the annual average infiltration into the entire collection system.
4. Repairing these defects would help reduce the cost of an anticipated wastewater treatment plant upgrade by reducing the design capacity and operation and maintenance costs of the upgraded plant. The upgraded plant likely will be required to meet more stringent effluent limitations anticipated in the Town's NPDES Permit. Further analysis beyond the scope of this study would be necessary to quantify the savings in capital and operation and maintenance costs. As discussed above, the uncertainty in these costs may influence what collection system repairs are made.
5. Smoke testing, building inspections, and dyed water testing did not identify significant sources of inflow, other than private sump pumps connected to the system. Inflow is not a large proportion of total wastewater flows. House inspections identified 45 sump pumps of which nine (9) are connected directly to the sanitary sewer system. Two (2) buildings have floor drains believed plumbed to the sanitary sewer system. Inspectors were denied entry to nine (9) buildings, so the existence of sump pumps in these buildings could not be confirmed. Only about one-half of the buildings in town were

inspected. Throughout the Town, roof leaders do not contribute inflow into the collection system.

6. The types of defects found by flow isolation testing, CCTV inspection, and manhole inspections confirm the main source of I/I into the collection system is in the form of infiltration, mainly from defective joints and sewer line connections to manholes. Identified defects included sagging sewer lines, mineral deposits at joints, and leaking connections between manholes and sewers.
7. The most significant defects identified in the collection system are settling or sagging sewer lines, probably resulting from poor subbase preparation during construction. As the pipelines sag, the joints separate and allow increased infiltration through the joints. Other segments showed signs of mineral deposits at the joints, which indicates previous infiltration. Repair of these defects should be completed to keep the system in good condition.
8. Thirteen (13) of 39 manholes inspected showed leaking connections between the manhole and connecting sewer lines. The cause of this defect is due probably to poor construction techniques. The lack of rubber seals at these joints will make a long-term repair difficult for this type of defect. However, these defects can lead to significant amounts of infiltration. Infiltration through such defects would be largely dependent on groundwater levels. Rising groundwater following rainfall events results in rainfall induced infiltration.
9. Erosion of sediment around leaking joints will lead to increased settlement at some joints. Such infiltration will continue to undermine the structural integrity of sewer segments and may lead to structural failure. Repair of these defects will help reduce the need for more costly excavation and replacement methods in the future.
10. Forty-eight (48) manholes were identified for inspections, however, only 39 could be found in the field. Inspectors were not able to find nine (9) manholes because these manholes have been buried or paved over. Another three (3) manholes were found below grade. These defects may allow stormwater to inflow into the collection system.
11. Private sewers connecting to the Pine Pond Residential Park showed high infiltration rates during the flow isolation work. Smoke testing in these areas did not identify any inflow sources.

B. Recommendations

The following recommendations are provided based on the results of this investigation:

1. Defects identified in this study that are cost effective to repair should be corrected. Correcting these defects will help maintain the collection system in a structurally sound condition. Failure to eliminate these defects will lead to increased infiltration, additional expense to transport and treat this excessive infiltration, and possibly structural collapse of certain segments of the collection system.
2. Rehabilitation by CIPP of sagging segments, especially those adjacent to the Lamprey River and in other areas of high year-round groundwater, should be considered in conjunction with chemical grouting of pipeline joints and manhole rehabilitation. Although more costly initially, CIPP will provide a longer term benefit to the Town that should be considered. Infiltration at sagging pipelines is often difficult to identify visually because the infiltration typically occurs at the invert of the pipeline, below the level of water flowing in the line. Continued infiltration into these lines may lead to increased erosion and sediment removal around joints, which will lead to increased infiltration and settlement of the pipeline and ultimately structural failure.
3. All private sump pumps connected directly to the collection system should be disconnected because they contribute extraneous flows to the collection system. Although they do not contribute a large proportion of total I/I over the course of a year, these flows add to the cost of transport and treatment. Also, during periods of high rainfall, peak flows in the collection system may exceed the design capacity of these sewer lines. Since the wastewater flows to the treatment facilities are approaching the design capacity, any reduction in inflow will help the existing facilities continue to meet the existing NPDES Permit effluent limitations. The Town should investigate specifically the area of Elm Court where the field crews identified definite sump pump activity. This area was not included in the building inspections, therefore, the Town should identify any sump pumps in this area and work to stop them from discharging directly to the collection system. Also, the Town should inspect periodically buildings in areas where groundwater is high to ensure sump pumps remain disconnected from the collection system.
4. The Town should investigate further the apparent high infiltration from private sewer lines of the Pine Pond Residential Park. Inflow is not expected to be a major contributor to wastewater flows from the park. However, it's location adjacent to Brannigan's Pond and the high early morning flows from this system may indicate excessive infiltration that should be removed from the collection system. The Town should investigate what authority it has to work with or direct the owner to complete a sewer system evaluation. The

owner should complete flow isolation of the private collection system and identify any significant water using equipment on site. Flow isolation should be conducted during the high groundwater season, and the Town should identify such times by coordinating this work when flows to the wastewater treatment plant are highest. Any sewer segments showing high rates of infiltration should be repaired.

5. At least nine (9) manholes in the collection system remain buried or paved over. Manhole frame and cover adjustment should be completed to bring these manholes back to grade. This will ensure any potential infiltration and inflow is eliminated and will facilitate regular and emergency maintenance and inspection of these manholes.
6. The Town should develop a routine inspection and maintenance program to maintain the collection system in good condition. The program should include regular inspection of manholes to document changing conditions. Records of inspection findings and manhole conditions should be kept on file. Town personnel should complete inspections of buildings not covered by this study to identify additional sump pumps or other potential sources of inflow.
7. When additional funds become available, the Town should complete flow isolation testing on those segments of Subsystem A, B, and C that were not covered by this study. The sewer segments in Subsystem B that were not flow isolated showed over 38,000 gpd of infiltration remaining. Information from the D-H 1980 study suggests some of the sewer segments in this subsystem are not usually below groundwater. Therefore, the source of the remaining high infiltration may be limited to relatively few segments with significant infiltration. It is recommended that the Town complete flow isolation testing on the remaining sewer segments in St. Laurent Street, Church Street, Maple Street, and Pleasant Street west of Main Street. In Subsystem A, additional flow isolation testing of sewer segments in Academy Street, Cate Street, and Prospect Street should be completed. In Subsystem C, the Town should test sewer segments in Acre Street, Calef Highway, and the sewer line crossing the railroad easement and connecting to the private lift stations south of the railroad tracks on Main Street.

REFERENCES

Dufresne-Henry, Inc., July 1980, Town of Epping, New Hampshire, Wastewater Facilities Planning Study, Infiltration/Inflow Analysis.

Dufresne-Henry, Inc., April 1988, Letter Report to Epping, New Hampshire Board of Water and Sewer Commissioners, Re: Infiltration/Inflow Study.

Eastern Pipe Service, Inc., March 1989, Letter to John O. Roberts, Inc., Re: Infiltration/Inflow Removal.

Eastern Pipe Service, Inc., February 1990, Letter to John O. Roberts, Inc., Re: Infiltration/Inflow Removal, Field Records of Manhole and CCTV Inspections taken January and February 1990.

Dufresne-Henry, Inc., April 1991, Sewer Collection System Map titled Wastewater Collection System, Epping, New Hampshire.

Massachusetts Department of Environmental Protection, revised January 1993, Guidelines for Performing Infiltration/Inflow Analyses and Sewer System Evaluation Survey.

U.S. Environmental Protection Agency, December 1975, Handbook for Sewer System Evaluation and Rehabilitation.

CORRESPONDENCE

October 1, 1996

Planning Directorate, Formulation Division
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Attention: Mr. Joseph L. Ignazio, Director of Planning

Subject: Contract DACA33-94-D-0011
Section 219 Environmental Infrastructure Investigation
Inflow/Infiltration and Sewer System Evaluation Study, Epping, New
Hampshire
Response to Comments on Draft Report

Dear Mr. Ignazio:

This letter provides our response to comments raised by your staff on the above referenced draft report dated July 1996. A copy of your comments, which were transmitted to us in a letter dated September 10, 1996 is enclosed. As requested, this response letter outlines how we have addressed each comment within the final report.

1. We agree with your comment that the final report would benefit by expanding the discussion of uncertainty in the future operation and maintenance costs of an upgraded wastewater treatment plant. Therefore, the analysis of treatment and transport costs has been edited to discuss both the high and low estimates of operation and maintenance at the upgraded wastewater treatment plant.
2. Further discussion has been included in the final report about the anticipated average annual reduction in I/I as well as the maximum daily reduction in I/I resulting from implementation of the collection system repairs.
3. The recommendations have been modified to direct the Town to complete house inspections in Elm Court. Sump pump activity was noted in this area during the flow isolation work, and this area was not included in the house-to-house inspections completed for this study.
4. An additional recommendation has been added to direct the Town to complete additional flow isolation testing in those sewer segments that were not tested in Subsystem A, B, and C. Not all of the collection system was flow isolated for this study, but Utility Pipeline Services, Inc. did record the additional infiltration coming from the untested segments.

5. Figure 2-1 taken from the 1980 Dufresne-Henry wastewater facility planning study has been included in Appendix A to show the county and town limits. Also included in this Appendix is a sewer collection system map, provided by the Town to the field crews, for the Pine Pond Residential Park.
6. The editorial comments noted in your comment letter have been addressed.
7. The dyed water testing data has been included in Appendix D.
8. The tables included within the report provide a summary of all public and private inflow and infiltration sites found during the field testing. The only private inflow sources identified are private sump pumps, which we recommend the Town have disconnected from the collection system. The infiltration sources found during flow isolation, CCTV inspection, and manhole inspection are summarized in the report.
9. We have not provided a 300 scale map of the sewer system with the final report. As noted in our scope, we could only provide this map if the Town was able to give us a Mylar copy, which they could not provide. Instead, we have photocopied the paper copy of the collection system map given to us by the Town. From this copy, we have developed the graphics in the report that identify the areas that were tested. Separate maps have been included to show the extent of flow isolation testing, CCTV inspection, and manhole inspections. The Town will be able to use these maps along with the field data records included in the Appendices to identify all inflow and infiltration sources found.

We have addressed all of the comments that you raised during review of the draft report. The Town of Epping has submitted a letter (copy enclosed) stating that they have no additional comments on the draft report. If you have any additional questions, please give me a call at 617-742-8060.

Very truly yours,

SVERDRUP CIVIL, INC.



Brian M. Donahoe

BMD:pvs

Enclosures

c: James A. Pappas



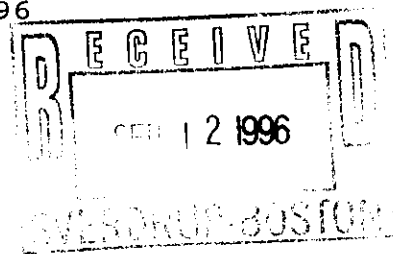
REF ID:
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAFLET ROAD
WALTHAM, MASSACHUSETTS 02254-9144



September 10, 1996

Planning Directorate
Formulation Division



Mr. Brian Donahoe
Sverdrup Civil, Inc.
Two Center Plaza
Boston, Massachusetts 02108

Dear Mr. Donahoe:

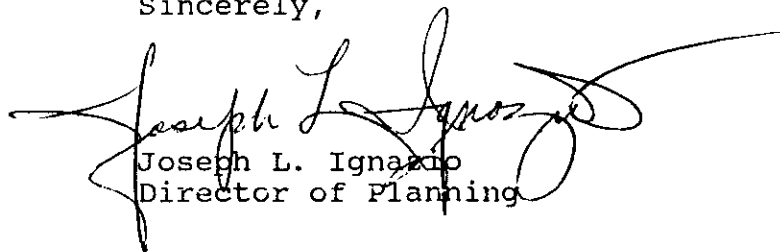
This letter is to transmit our comments on your draft Inflow/Infiltration and Sewer System Evaluation for the Town of Epping, New Hampshire, dated July 1996. This study was authorized by Section 219 of the Water Resources Development Act of 1992, and was performed by you under Contract No. DACW33-94-D-0011, Indefinite Delivery Contract for Architect-Engineering Services, Various Locations in New England, Request for Proposal (RFP) 6.

The report is well written, and the study appears to have addressed the issues contained in the Scope of Work dated June 6, 1995. The work performed by you and by your sub-contractor, Utility Pipeline Inc. (UPI), appears to be thorough and professional.

Our comments on the draft report are contained on Enclosure 1. We request that you make any appropriate changes to the report and that you respond to our comments in a letter. Please include this letter in the report in a "Correspondence" section along with any written comments from the Town of Epping and your letter of response. This may help answer the questions of those reading the report at a later date.

If you have any questions, please contact the Study Manager, Mr. Matthew Walsh, at (617) 647-8647.

Sincerely,


Joseph L. Ignazio
Director of Planning

Enclosure

September 10, 1996

Corps of Engineers Planning Directorate Comments on Draft Report

Inflow/Infiltration and Sewer System Evaluation for the Town of Epping, NH, July 1996

Content

1. On page X -5, the report states that the cost to transport and treat (T&T) sewage is currently \$125,000 per year, and is expected to increase due to the cost of required upgrades to the existing system. The report states that the town has received cost estimates ranging from a low of \$48,000 to more than \$100,000 for the upgrades. The report concludes that because of the uncertainty, the higher cost was used. Therefore, the cost to transport and treat wastewater flow plus I/I was estimated to be \$235,000 per year.

It appears that the uncertainty in the cost to transport and treat warrants an analysis of both the low and high costs. Therefore, in addition to your existing discussion of the cost effectiveness of removing excessive I/I based on a T&T cost of \$225,000, please present a discussion of the cost effectiveness of removing I/I based on the lower cost of \$173,000 per year (\$125,000 + \$48,000).

2. Total annual I/I in 1995 is estimated to be 43,000 gpd (page IX-1). Baseline infiltration system wide was 160,560 March 15, 1996 (Table VI-1) during a high groundwater period. Therefore, I/I during the high groundwater period appeared to be approximately 3.7 times the annual average. The "Infiltration Rate Recovered" reported in Table X-5 was obtained from the flow isolation work performed April 3-4, 1996, also during a high groundwater period. It therefore appears that the "Infiltration Rate Recovered" in Table X-5 should be divided by 3.7 to obtain a more representative expected annual reduction in infiltration. Please make this change in the discussion and all appropriate tables, or discuss why it is not appropriate to do so.

3. It appears that the town should could conduct house-to-house inspections on Elm Court since the field crews reported "definite sump pump activity" in the Elm Court segment during the flow isolation tests (page VI - 2). Please add this item to the "Recommendations" section (page XI - 2). Although item 3 states that all sump pumps connected directly to the collection system should be disconnected, it appears that it would be useful to the town to separately flag this area, since it was not included in the house-to-house inspections conducted by Utility Pipeline Inc. (UPI).

4. During flow isolation UPI identified the flow contribution to the up gradient (untested) sewer lines. In the case of subsystem B, infiltration in the untested portion was high. This is useful information, and UPI is commended for obtaining it. Please present a table prioritizing which subsystems and segments of the sewer system should be inspected in the future should funding become available, and what inspection work should be performed on those segments. The table could be presented in the "Recommendations" section, in another existing section, or in a new section.

Editorial

Page IX - 1, second paragraph, last line: change 43,000 gpd to 42,000 gpd.

Page X - 3, fifth paragraph, second line: change leak to leaks.

Page X -5 , 1st paragraph, fourth line, should read "... should be based on...".

Appendix A, Figure 2-1: What is this figure intended to show? Is there a legend which should accompany it?

Appendix D: As you identified to us, the dyed water testing field work record is missing.

Two items listed in Task 9 of the Scope of Work are not contained in the report: (1) a summary table listing public and private infiltration and inflow sites identified during physical inspection of the sewer system, and (2) a 300 scale schematic map of the sewer system showing those sites.

Town of Epping, NH

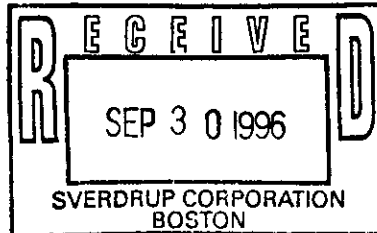
Incorporated 1741

OFFICE OF THE TOWN ADMINISTRATOR
TOWN HALL
157 MAIN STREET
EPPING NH 03042

DAVID BARKER
VOICE 603.679.5441
FAX 603.679.3302
E-MAIL: dbarker@nh.ultranet.com

September 26, 1996

Paul Savard, Sverdrup Civil, Inc
Two Center Plaza
Boston MA 02108




Dear Mr. Savard:

The Town of Epping has reviewed the draft report of the Inflow/Infiltration and sewer system evaluation study provided recently. I have no additions or deletions, or comments contrary to the report.

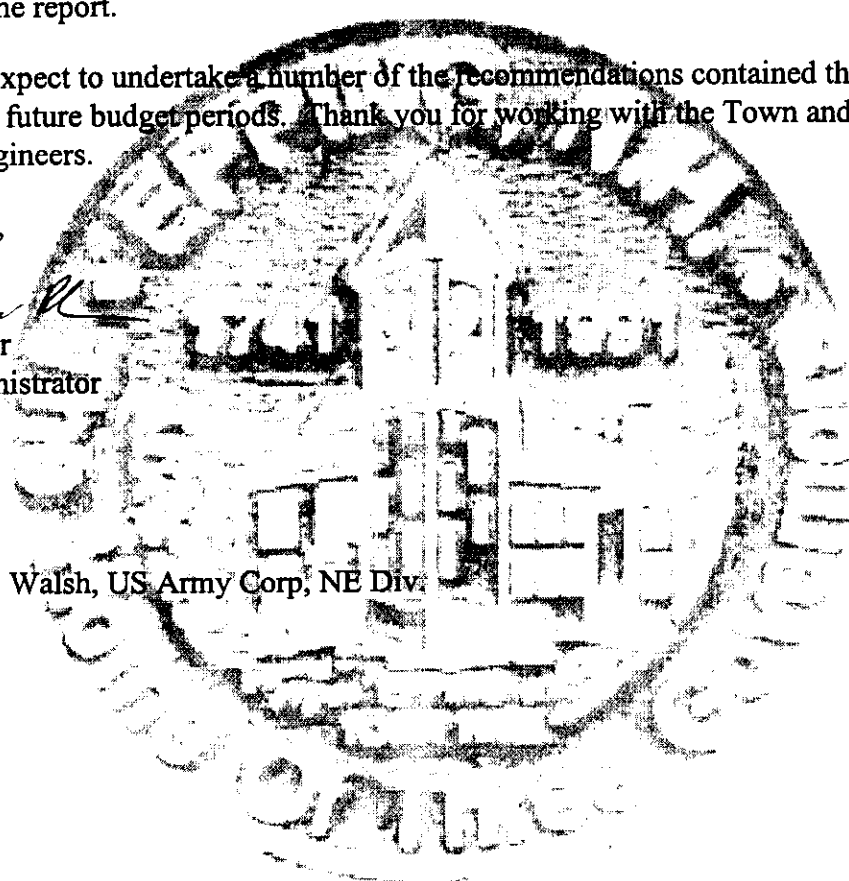
We expect to undertake a number of the recommendations contained therein as we proceed into future budget periods. Thank you for working with the Town and the US Army Corps of Engineers.

Best regards,


David Barker
Town Administrator

/db

COPY: Matt Walsh, US Army Corp, NE Div



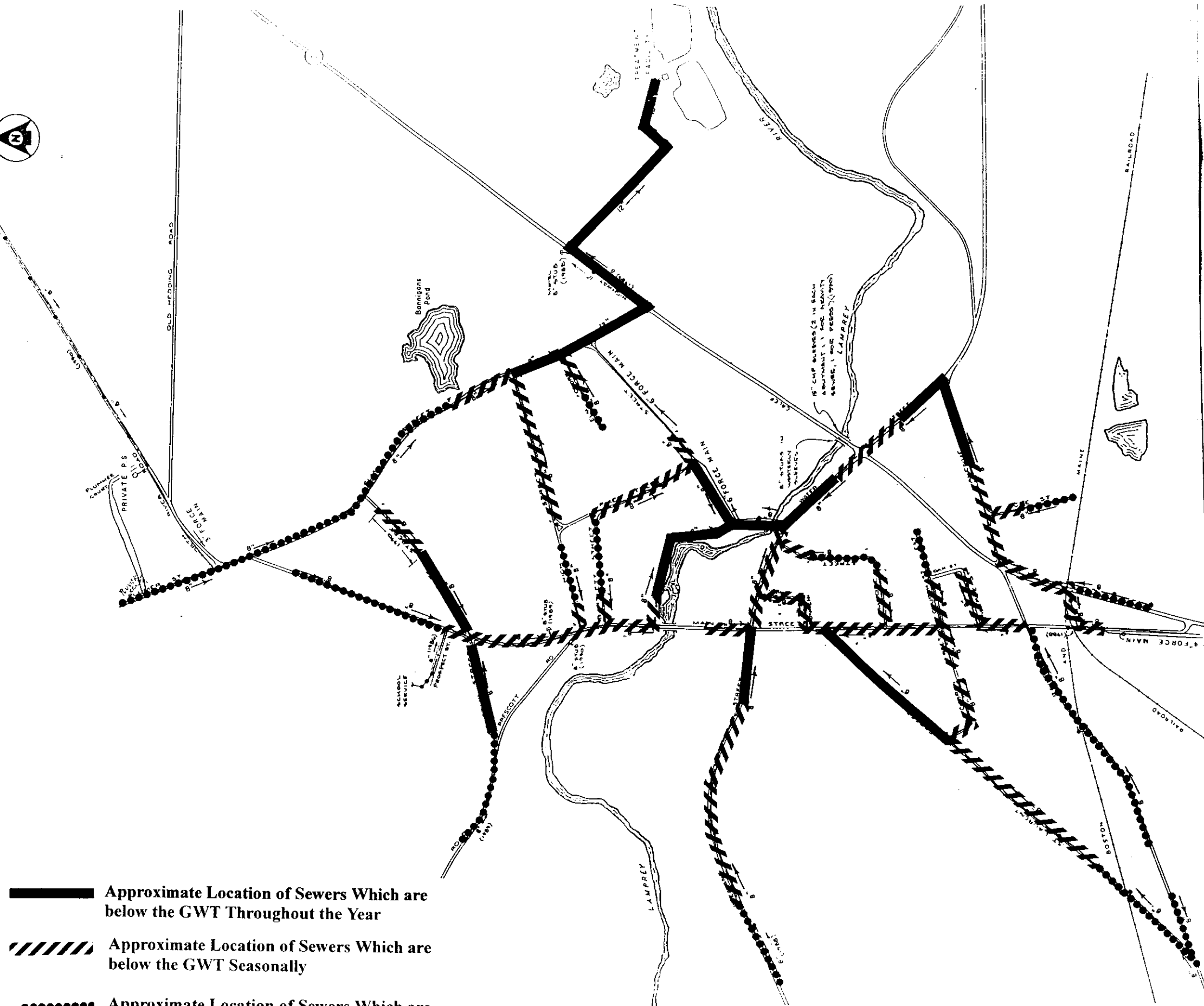
APPENDIX A

RELEVANT INFORMATION FROM PREVIOUS REPORTS

Relevant Information from Previous Reports

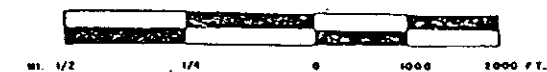
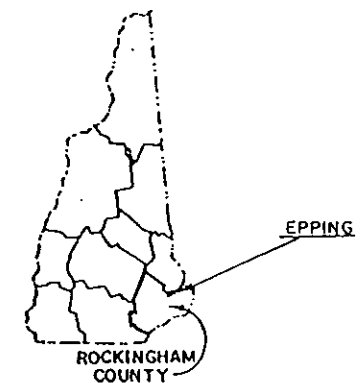
The figures contained in this appendix were reproduced from available information to show additional information used within the report.

1. Figure 2-1, taken from Town of Epping, New Hampshire, Wastewater Facility Planning Study, Infiltration/Inflow Analysis, dated July 1980 by Dufresne-Henry, Inc. Reproduced to show town and county boundaries.
2. Figure 3-1, taken from Town of Epping, New Hampshire, Wastewater Facility Planning Study, Infiltration/Inflow Analysis, dated July 1980 by Dufresne-Henry, Inc. Reproduced to show sewer segments anticipated to be above or below groundwater throughout the year.
3. Pine Pond Residential Park sewer collection system map, provided by Town, showing layout of sewer lines within this private residential neighborhood in Epping. The sewer system within this private development should be tested further to identify potential contribution of infiltration into the Town's collection system.



- Approximate Location of Sewers Which are below the GWT Throughout the Year
- Approximate Location of Sewers Which are below the GWT Seasonally
- Approximate Location of Sewers Which are never below the GWT

COLLECTION SYSTEM SEWER SUBMERGENCE CHARACTERISTICS



WASTEWATER FACILITY PLANNING STUDY

prepared for the town of
EPPING, N.H.

prepared by

Adapted from:
DH Dufresne-Henry

FIGURE 3-1



SUMMARY
 TO BE CONSTRUCTED
 IN THREE PHASES:
 TWO-50 EACH;
 ONE-18
 GROSS DENSITY:
 7 PER ACRE

TYPICAL LOT SIZE

ENTRANCE

DR. O'CONNOR LAND
 1764'

HIGHLAND DRIVE

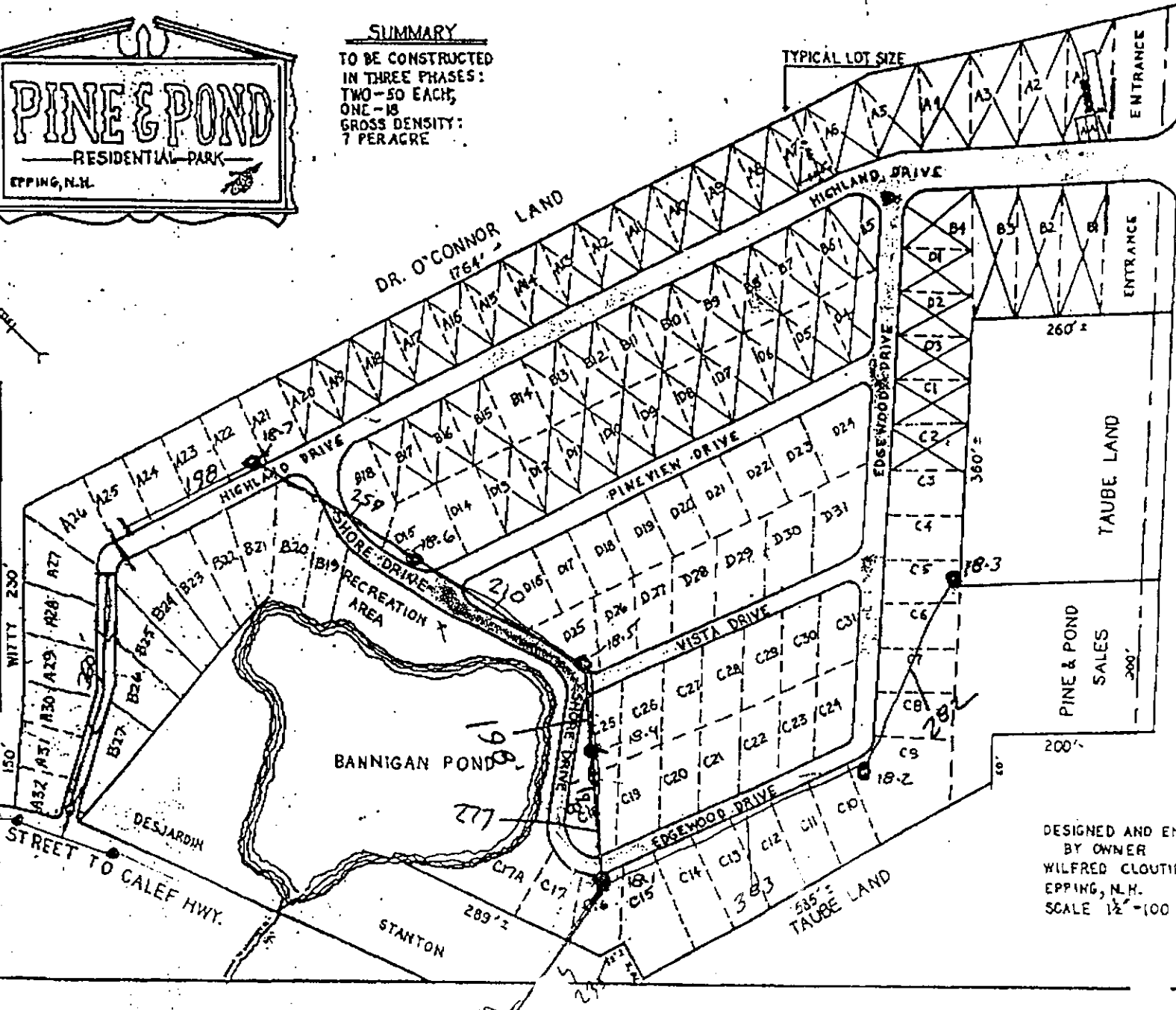
ENTRANCE

TAUBE LAND

PINE & POND
 SALES

CALEF HWY. (RTE. 125)

- KEY**
- FRONT
 - MOBILE HOME STAND
 - PATIO - LOT A1
 - AUTO PARKING
 - LOT, LINE & MARKER
 - SEWER TRUNK LINE
 - WATER SUPPLY LINE
 - STREET LIGHTING
 - LOTS SERVED BY SEPTIC SYSTEMS



DESIGNED AND ENGINEERED
 BY OWNER
 WILFRED CLOUTIER
 EPPING, N.H.
 SCALE 1/2" = 100 FEET

APPENDIX B

BUILDING INSPECTION, HOUSE-TO-HOUSE FIELD SURVEYS

**EPPING, NH
REPORT OF SEWER SYSTEM
EVALUATION SURVEY FIELD WORK
HOUSE-TO-HOUSE SURVEY
OCTOBER 1995**

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2	PROCEDURES	2
3	RESULTS	3

LIST OF APPENDICES

<u>APPENDIX</u>	<u>CONTENTS</u>
1	SUMMARY OF HOUSE-TO-HOUSE SURVEY RESULTS
2	HOUSE-TO-HOUSE SURVEY LOGS

LIST OF TABLES

<u>TABLE</u>	<u>CONTENTS</u>
1	SUMMARY OF HOUSE-TO-HOUSE SURVEY PROGRAM
2	SUMMARY OF SUMP PUMPS TO SANITARY
3	SUMMARY OF OBSERVED OPEN PIPES IN BASEMENT
4	SUMMARY OF SUSPECT ROOF LEADERS
5	SUMMARY OF SUSPECT YARD DRAINS
6	SUMMARY OF OBSERVED SUMP PUMPS NOT DISCHARGING TO SANITARY
7	SUMMARY OF ADDRESSES WHERE INSPECTORS WERE REFUSED ENTRY

SECTION 1

PURPOSE AND SCOPE

The purpose of this study was to investigate select areas of the Epping, NH sanitary sewer system for the purpose of identifying areas of possibly excessive infiltration/inflow. The findings of the house-to-house survey field work are summarized in this report.

SECTION 2

PROCEDURES

2-1 HOUSE-TO-HOUSE SURVEY

Each and every home and business establishment within the designated study area was inspected to determine whether roof drains, cellar floor drains, sump pumps, or other such I/I sources were present, and where they discharged. The inspector recorded his findings for each and every property visited on a separate log sheet. A follow-up visit was made to properties where no one was present during the initial inspection attempt. If the inspector was not admitted into the building, it was noted on the log sheet.

Results of the **HOUSE-TO-HOUSE SURVEY** are presented in Section 3-1.

SECTION 3

RESULTS

3-1 HOUSE TO HOUSE SURVEY

A survey was attempted on a total of 159 buildings within the study area. Homeowners refused to allow the inspectors entry at 9 locations. **Table 1** presents a summary of the results of the house-to-house survey program. **Table 2** presents a listing of buildings where sump pumps were observed to be plumbed to discharge directly to the sanitary sewer. **Table 3** presents a listing of buildings where open pipes were observed within the basement.

Suspect infiltration/inflow sources were also noted. **Table 4** presents a listing of buildings with roof leaders which may possibly discharge to the sanitary sewer. **Table 5** presents a listing of buildings with yard drains which may possibly discharge to the sanitary sewer.

The items listed in **Table 4 through 5** should be considered for follow-up dyed water verification.

Table 6 presents a listing of buildings where sump pumps were present, but were not plumbed to discharge into the sanitary sewer at the time of observation. The items listed in **Table 6** should be considered for follow-up verification at a later time.

Table 7 presents a listing of buildings where the inspectors were refused entry.

A detailed summary of the results of the house-to-house survey appears as **Appendix 1** of this report. Individual log sheets of the house-to-house inspection appear as **Appendix 2** of this report.

EPPING, NH
SUMMARY OF HOUSE SURVEY RESULTS

LOCATION	SEWER EXITS STRUCTURE				SUMP PUMP DISCHARGE POINT				GRAVITY STRUCTURE INSIDE HOUSE				OTHER OBSERVATIONS							COMMENTS
	HOUSES SURVEYED	ABOVE FLOOR LEVEL	BELOW FLOOR LEVEL	UNKNOWN	SANITARY SEWER	STORM SEWER	DRY WELL	OUTSIDE GROUND SURFACE	OTHER	OPEN CLEANOUT	BASEMENT DRAIN	OPEN PIPE	SUMP PIT	LEADERS TO SANITARY	LEADERS INTO GROUND	YARD DRAIN	WINDOW WELL	STAIR WELL	DRIVENWAY DRAIN	
0000 ACRE STREET		X						X												
0004 ACRE STREET		X						X				X								
0006 ACRE STREET			X																	
0008 ACRE STREET																				
0010 ACRE STREET			X						X											
0013 ACRE STREET																				
0014 ACRE STREET		X			X															
0015 ACRE STREET		X						X												
0024 ACRE STREET																				
0001 BUNKER AVENUE			X																	
0003 BUNKER AVENUE		X																		
0068 CALEF HIGHWAY - R		X																		
0007 CHURCH STREET																				
0010 CHURCH STREET		X																		
0014 CHURCH STREET		X																		
0016 CHURCH STREET																				
0018 CHURCH STREET		X																		
0020 CHURCH STREET			X																	
0021 CHURCH STREET		X																		
0023 CHURCH STREET		X			X															
0037 CHURCH STREET		X						X												
0041 CHURCH STREET		X						X												
0054 CHURCH STREET		X																		
0059 CHURCH STREET		X						X												
0015 CHURCH STREET - C																				
0030 MAIN ST - GENERAL																				
0000 MAIN STREET																				
0022 MAIN STREET		X																		
0028 MAIN STREET		X																		
0034 MAIN STREET		X																		
0056 MAIN STREET		X						X												
0057 MAIN STREET		X																		
0072 MAIN STREET		X			X															
0076 MAIN STREET																				
0082 MAIN STREET																				
0084 MAIN STREET																				
0087 MAIN STREET		X						X												
0088 MAIN STREET		X													X					
0089 MAIN STREET		X																		
0095 MAIN STREET		X						X												
0096 MAIN STREET		X																		
0100 MAIN STREET		X			X															
0106 MAIN STREET																				
0109 MAIN STREET			X																	
0110 MAIN STREET		X						X												
0117 MAIN STREET																				
0131 MAIN STREET			X																	
0144 MAIN STREET			X																	
CATEGORY TOTALS	0	82	25	1	7	9	0	0	30	6	0	0	2	0	0	7	1	0	0	0

EPPING, NH
SUMMARY OF HOUSE SURVEY RESULTS

LOCATION	SEWER EXITS STRUCTURE				SUMP PUMP DISCHARGE POINT				GRAVITY STRUCTURE INSIDE HOUSE				OTHER OBSERVATIONS							COMMENTS
	HOUSES SURVEYED	ABOVE	BELOW	UNKNOWN	SANITARY SEWER	STORM SEWER	DRY WELL	OUTSIDE GROUND SURFACE	OTHER	OPEN CLEANOUT	BASEMENT DRAIN	OPEN PIPE	SUMP PIT	ROOF	ROOF	YARD DRAIN	WINDOW WELL DRAIN	STAIR WELL DRAIN	DRIVEWAY DRAIN	
		FLOOR LEVEL	FLOOR LEVEL											LEADERS TO SANITARY	LEADERS INTO GROUND (SUSPECT)					
0069 MAIN STREET - FEC		X						X												
0105 MAIN STREET - HOU																				
0000 MAIN STREET - LAU		X																		
0133 MAIN STREET - LED			X																	
0071 MAIN STREET - POS			X																	
0009 MAPLE STREET				X																
0011 MAPLE STREET																				
0010 MOORE STREET		X						X												
0016 MOORE STREET			X																	
0017 MOORE STREET		X																		
0029 MOORE STREET																				
0033 MOORE STREET			X																	
0000 PLEASANT STREET																				
0000 PLEASANT STREET																				
0001 PLEASANT STREET		X							X											
0003 PLEASANT STREET		X						X							X					
0006 PLEASANT STREET																				
0007 PLEASANT STREET		X						X												
0017 PLEASANT STREET		X																		
0019 PLEASANT STREET																				
0023 PLEASANT STREET		X			X															
0024 PLEASANT STREET		X						X												
0027 PLEASANT STREET		X						X												
0028 PLEASANT STREET																				
0032 PLEASANT STREET		X						X												
0040 PLEASANT STREET		X													X					
0043 PLEASANT STREET		X							X											
0045 PLEASANT STREET		X																		
0046 PLEASANT STREET															X					
0049 PLEASANT STREET		X													X					
0059 PLEASANT STREET			X																	
0061 PLEASANT STREET																				
0064 PLEASANT STREET		X						X												
0069 PLEASANT STREET		X																		
0075 PLEASANT STREET																				
0084 PLEASANT STREET																				
0092 PLEASANT STREET																				
0095 PLEASANT STREET		X																		
0008 PLEASANT STREET -			X																	
0020 PLEASANT STREET -																				
0014 RAILROAD AVENUE			X																	
0019 RAILROAD AVENUE																				
0020 RAILROAD AVENUE																				
0022 RAILROAD AVENUE		X						X												
0023 RAILROAD AVENUE				X																
0027 RAILROAD AVENUE				X																
0035 RAILROAD AVENUE		X																		
0038 RAILROAD AVENUE		X																		
CATEGORY TOTALS	0	82	25	1	7	9	0	0	30	6	0	0	2	0	0	7	1	0	0	0

District No.

DREW TWO INC
EPPING, NH

SUMMARY OF HOUSE SURVEY RESULTS

LOCATION	SEWER EXITS STRUCTURE				SUMP PUMP DISCHARGE POINT				GRAVITY STRUCTURE INSIDE HOUSE				OTHER OBSERVATIONS							COMMENTS
	HOUSES SURVEYED	ABOVE FLOOR LEVEL	BELW FLOOR LEVEL	UNKNOWN	SANITARY SEWER	STORM SEWER	DRY WELL	OUTSIDE GROUND SURFACE	OTHER	OPEN CLEANOUT	BASEMENT DRAIN	OPEN PIPE	SUMP PIT	LEADERS TO SANITARY	ROOF INTO GROUND (SUSPECT)	ROOF INTO YARD (SUSPECT)	WINDOW WELL DRAIN (SUSPECT)	STAIR WELL DRAIN (SUSPECT)	DRIVEWAY DRAIN (SUSPECT)	
0042 RAILROAD AVENUE		X						X							X					
0067 RAILROAD AVENUE				X																
0074 RAILROAD AVENUE			X		X															
0096 RAILROAD AVENUE		X						X												
0100 RAILROAD AVENUE		X			X															
0104 RAILROAD AVENUE		X			X															
0108 RAILROAD AVENUE			X																	
0109 RAILROAD AVENUE		X																		
0110 RAILROAD AVENUE		X																		
0112 RAILROAD AVENUE		X																		
0113 RAILROAD AVENUE		X																		
0116 RAILROAD AVENUE																				
0126 RAILROAD AVENUE		X																		
0129 RAILROAD AVENUE																				
0134 RAILROAD AVENUE		X						X												
0140 RAILROAD AVENUE																				
0000 ROUTE 27 - HARLOW		X																		
0007 ST. LAURENT STREE		X																		
0018 ST. LAURENT STREE		X																		
0021 ST. LAURENT STREE																				
0032 ST. LAURENT STREE																				
0035 ST. LAURENT STREE		X																		
0037 ST. LAURENT STREE			X																	
0041 ST. LAURENT STREE			X						X											
0045 ST. LAURENT STREE				X				X												
0047 ST. LAURENT STREE		X																		
0053 ST. LAURENT STREE		X																		
0057 ST. LAURENT STREE																				
0058 ST. LAURENT STREE			X																	
0060 ST. LAURENT STREE		X						X												
0061 ST. LAURENT STREE																				
0065 ST. LAURENT STREE		X																		
0069 ST. LAURENT STREE		X																		
0072 ST. LAURENT STREE		X						X												
0076 ST. LAURENT STREE		X																		
0077 ST. LAURENT STREE		X																		
0080 ST. LAURENT STREE		X														X				
0083 ST. LAURENT STREE																				
0084 ST. LAURENT STREE			X																	
0085 ST. LAURENT STREE		X						X												
0088 ST. LAURENT STREE		X						X												
0089 ST. LAURENT STREE		X																		
0091 ST. LAURENT STREE																				
0096 ST. LAURENT STREE		X																		
0000 WATER STREET																				
0001 WATER STREET			X																	
0002 WATER STREET																				
0014 WATER STREET			X																	
CATEGORY TOTALS	0	82	25	1	7	9	0	0	30	6	0	0	2	0	0	7	1	0	0	0

CREW TWO INC
EPPING, NH
SUMMARY OF HOUSE SURVEY RESULTS

14112

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 5:09

INTERVIEWER DA/DC

1. Address of structure 0000 ACRE STREET

2. No one home, left card () Not Admitted ().

3. At what level does the sewer pipe exit the structure?

(X) Above the floor level approximately 3' .

() Below floor level at unknown depth.

() Below floor level approx. (visible from plumbing access pit)

() Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

() Sanitary Sewer

() Dry Well

() Storm Sewer

(X) Ground Surface

() Other

5. Can water enter the sanitary sewer via:

YES NO

() (X) Open Cleanout

YES NO

() (X) Open Pipe

() (X) Basement Drain

() (X) Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

Stick Sketch of
Positive Finds

7. Outside House

YES NO

() (X) Roof leaders into
ground

() (X) Yard drain

() (X) Window well drain

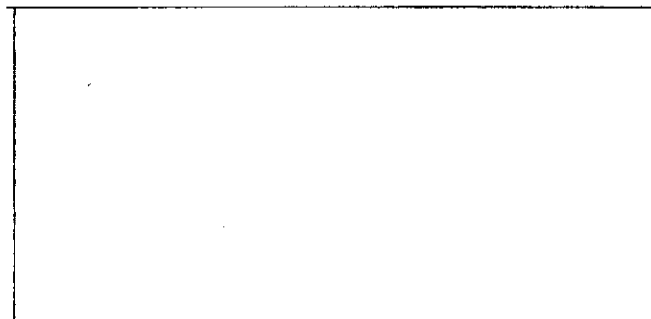
() (X) Stair well drain

() (X) Driveway drain

Points of Discharge

()

() Unknown



Front of House

8. Comments FIRST HOUSE ON LEFT, NUMBER ON HOUSE IS 6 BUT WE HAVE ANOTHER 6 ON THIS STREET. DIRT BASEMENT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **5:12** INTERVIEWER **DC/DA**

1. Address of structure **0004 ACRE STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately **5'**
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|------|-----|
| () | () | (X) | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

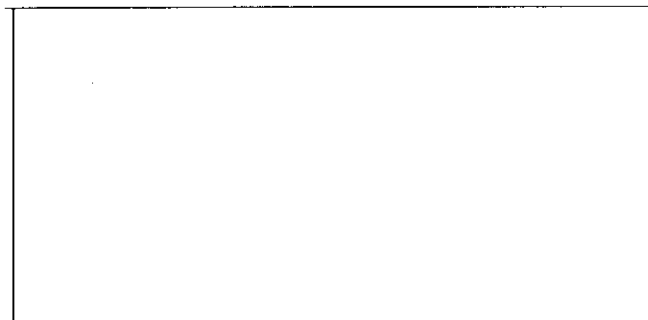
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments **SUMP PUMP DISCHARGE COULD REACH OPEN PIPE.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:19

INTERVIEWER DA/DC

1. Address of structure 0006 ACRE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately .
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **1:22** INTERVIEWER **DA/DC**

1. Address of structure **0008 ACRE STREET**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe
Basement Drain Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Roof leaders into ground
Yard drain
Window well drain
Stair well drain
Driveway drain

Points of Discharge
()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments **SECOND CALL MADE ON 8/28/95 AT 5:12 PM.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **1:40** INTERVIEWER **DA/DC**

1. Address of structure **0010 ACRE STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately .
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
(X) Other **OLD PIPE**
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe
Basement Drain Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House Stick Sketch of
Positive Finds

YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Roof leaders into ground
Yard drain
Window well drain
Stair well drain
Driveway drain

Points of Discharge
()
() Unknown

Front of House
8. Comments **OWNER STATED, SUMP PUMP NOT HOOKED UP AT THIS TIME.
DEHUMIDIFIER DRAINS INTO OLD PIPE ALSO, DISCHARGE POINT UNKNOWN.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **1:24** INTERVIEWER **DA/DC**

1. Address of structure **0013 ACRE STREET**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe

Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

YES NO

() (X) Roof leaders into ground

() (X) Yard drain

() (X) Window well drain

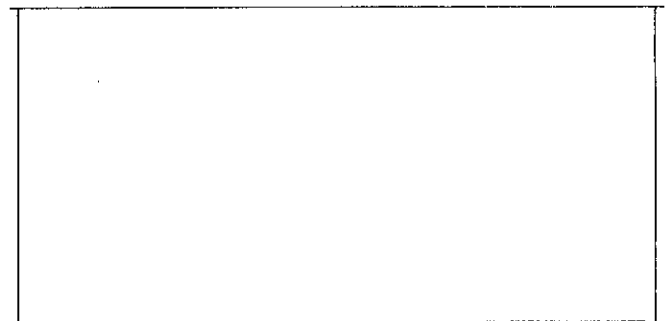
() (X) Stair well drain

() (X) Driveway drain

Points of Discharge

()

() Unknown



Front of House

8. Comments **SECOND CALL MADE ON 8/28/95 AT 5:13 PM.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:31 INTERVIEWER DA/DC

1. Address of structure 0014 ACRE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
(X) Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **5:16** INTERVIEWER **DA/DC**

1. Address of structure **0015 ACRE STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(**X**) Above the floor level approximately **5'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (**X**) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (**X**) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (**X**)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments **POOL IN BACKYARD.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:28 INTERVIEWER DA/DC

1. Address of structure 0024 ACRE STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
☐ Above the floor level approximately
☐ Below floor level at unknown depth.
☐ Below floor level approx. (visible from plumbing access pit)
☐ Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
☐ Sanitary Sewer ☐ Dry Well
☐ Storm Sewer ☐ Ground Surface
☐ Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Points of Discharge

☐
☐ Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments SECOND CALL MADE ON 8/28/95 AT 5:20 PM, OWNERS BROTHER LIVES NEXT DOOR AND TOLD US ACCESS IS OBSTRUCTED, CRAWL SPACE. HE ALSO SAID THAY HAVE TWO SUMP PUMPS, DISCHARGE UNKNOWN.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **1:16** INTERVIEWER **DA/DC**

1. Address of structure **0001 BUNKER AVENUE**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately .
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments **PIPES BEHIND FINISHED WALLS.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:14 INTERVIEWER DA/DC

1. Address of structure 0003 BUNKER AVENUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 1' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

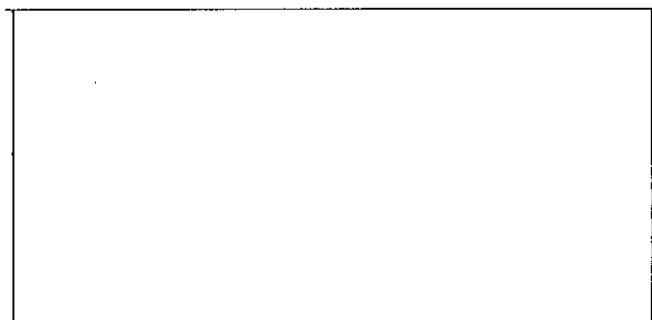
YES	NO	YES	NO
()	(X)	()	(X)
()	(X)	()	(X)
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Points of Discharge

()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:53 INTERVIEWER DA/DC

1. Address of structure 0068 CALEF HIGHWAY - ROUTE 125
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments FRENCH DRAIN ENTERING SUMP PIT, NO SUMP PUMP. TENANT TOLD US THAT THEIR IS A DIP AT THE END OF DRIVEWAY AND WHEN IT RAINS THE WATER ACCUMULATES AND SMELLS BAD.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:34 INTERVIEWER DA/DC

1. Address of structure 0007 CHURCH STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

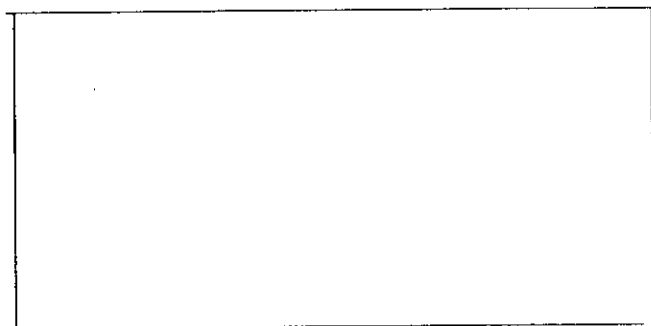
Stick Sketch of
Positive Finds

7. Outside House

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments OWNER DIDN'T WANT US TO ENTER, HE TOLD US THAT THE BASEMENT WAS WET AND DIRTY WITH A CRAWL SPACE.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **5:36** INTERVIEWER **DA/DC**

1. Address of structure **0010 CHURCH STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **3.5'** .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X)	()	(X)
()	(X)	()	(X)
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

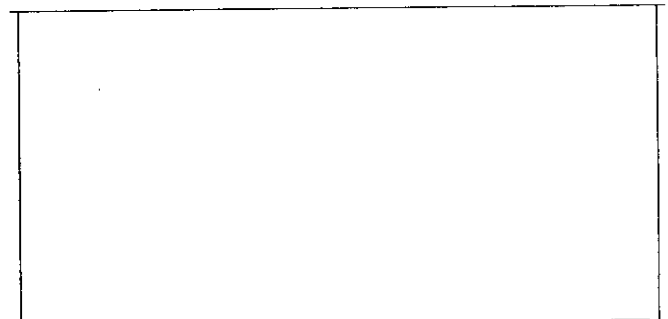
YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Points of Discharge

()

() Unknown
8. Comments **OPEN PIPE ON BASEMENT FLOOR LOOKS LIKE OLD SEPTIC PIPE.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 6:01 INTERVIEWER DA/DC

1. Address of structure 0014 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

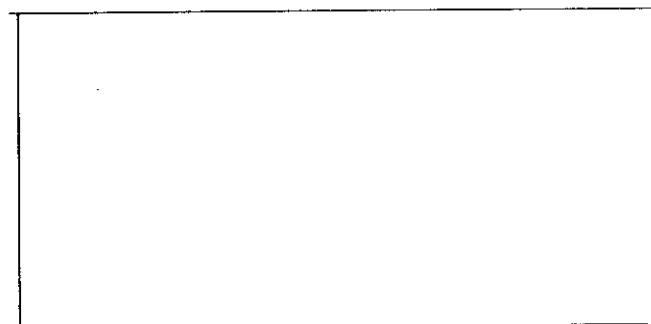
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **5:51** INTERVIEWER **DA/DC**

1. Address of structure **0016 CHURCH STREET**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

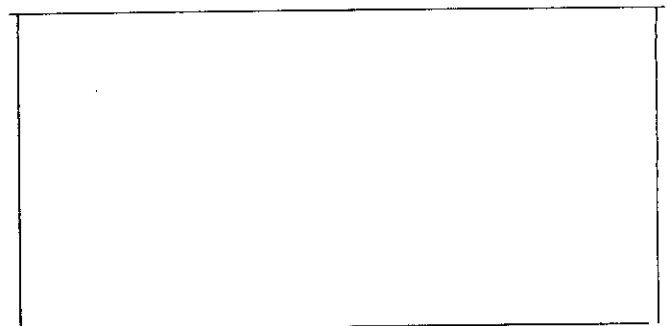
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments **SECOND CALL MADE ON 8/28/95 AT 4:35 PM.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:57

INTERVIEWER DA/DC

1. Address of structure 0018 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

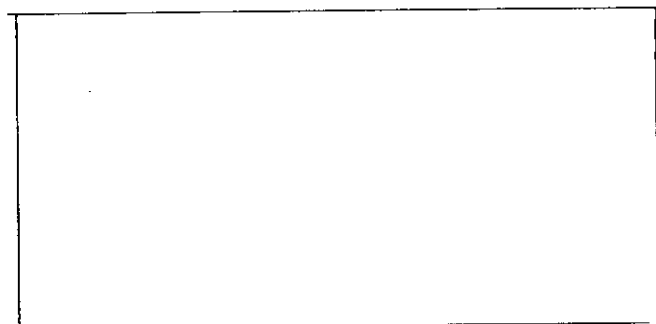
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:54

INTERVIEWER DA/DC

1. Address of structure 0020 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

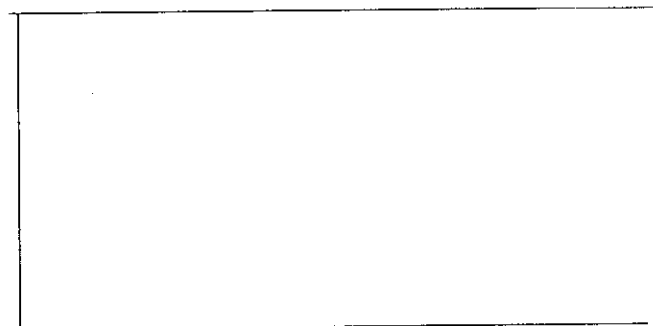
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:45 INTERVIEWER DA/DC

1. Address of structure 0021 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:50 INTERVIEWER DA/DC

1. Address of structure 0023 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
(X) Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 6:17 INTERVIEWER DA/DC

1. Address of structure 0037 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

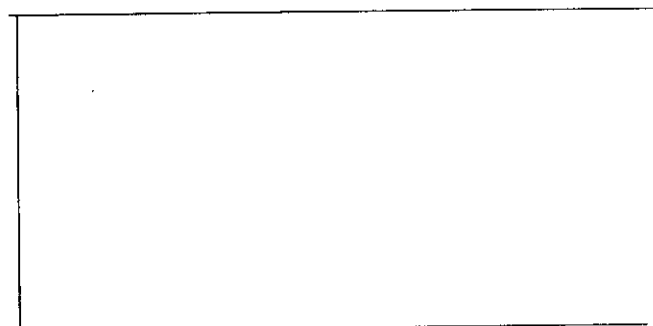
Stick Sketch of
Positive Finds

7. Outside House

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
FPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 6:20

INTERVIEWER DA/DC

1. Address of structure 0041 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4.5'
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X)	()	(X)
()	(X)	()	(X)
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

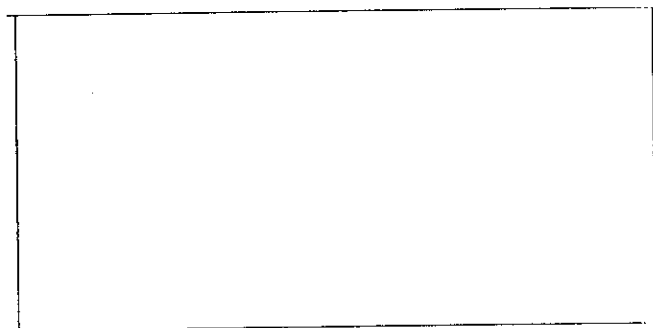
YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Points of Discharge

()

() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **6:29** INTERVIEWER **DA/DC**

1. Address of structure **0054 CHURCH STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **5'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X)	()	(X)
()	(X)	()	(X)
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

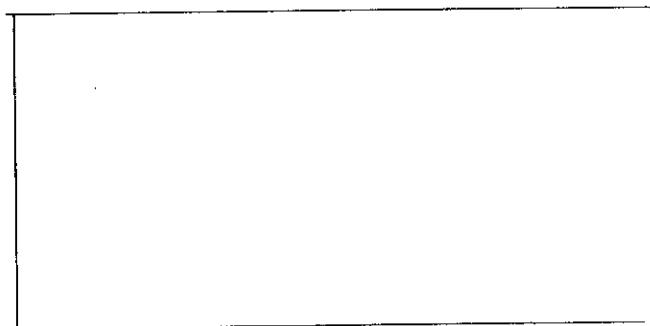
YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Points of Discharge

()

() Unknown
8. Comments **BASEMENT DRAIN DISCHARGES TO DRYWELL PER OWNER.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

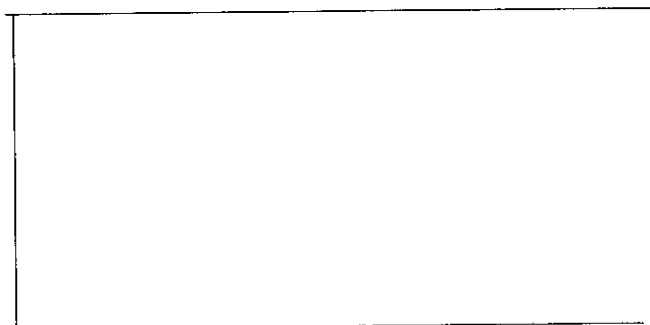
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 11:13 INTERVIEWER DA/DC

1. Address of structure 0059 CHURCH STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments TWO SEWER PIPES EXITING STRUCTURE.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **5:39**

INTERVIEWER **DA/DC**

1. Address of structure **0015 CHURCH STREET - CHURCH & RECTORY**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

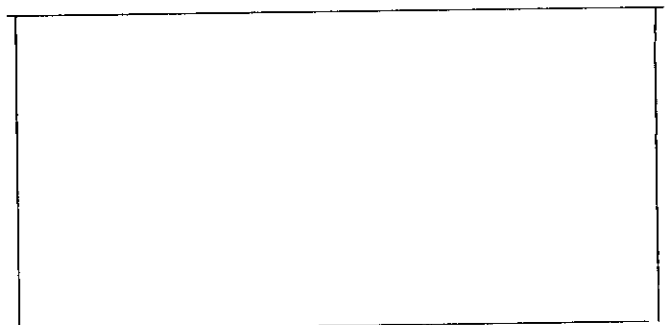
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments **SECOND CALL MADE ON 8/28/95 AT 10:37 AM. WE WERE TOLD THAT THE PRIEST LIVES ACROSS THE STREET AND COULD LET US IN. WE TRIED TO GET IN TOUCH WITH HIM AT SEVERAL DIFFERENT TIMES. TRUCK IN YARD.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/23/95** TIME COMPLETED **9:51** INTERVIEWER **DA/DC**

1. Address of structure **0038 MAIN ST - GENERAL DENISTRY**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
- NOTE: sketch which leaders connected.

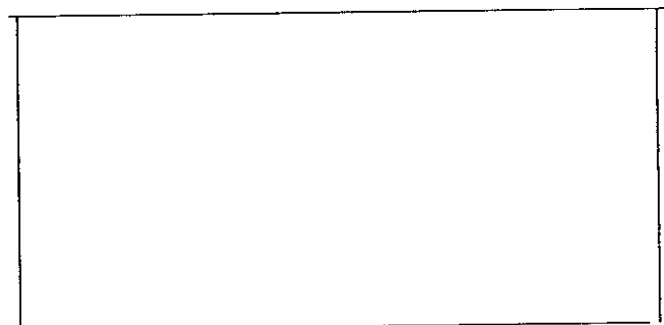
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments **SECOND CALL MADE ON 8/28/95 AT 12:35 PM, DOOR LOCKED BOTH TIMES.**

DISTRICT

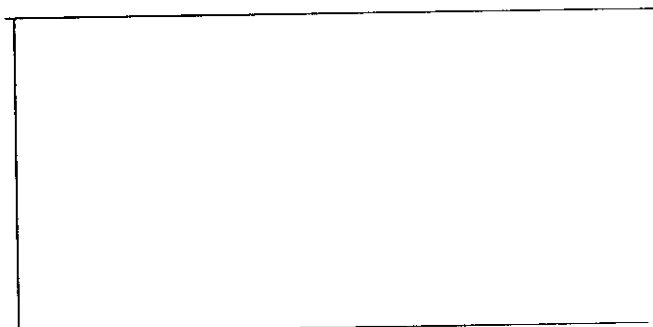
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:10 INTERVIEWER DA/DC

1. Address of structure 0000 MAIN STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
8. Comments WHITE HOUSE ACROSS FROM 38 MAIN STREET. SECOND CALL MADE ON 8/28/95 AT 5:45 PM, APPEARS VACANT.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:28 INTERVIEWER DA/DC

1. Address of structure 0022 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments

Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:10 INTERVIEWER DA/DC

1. Address of structure 0028 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately ON .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

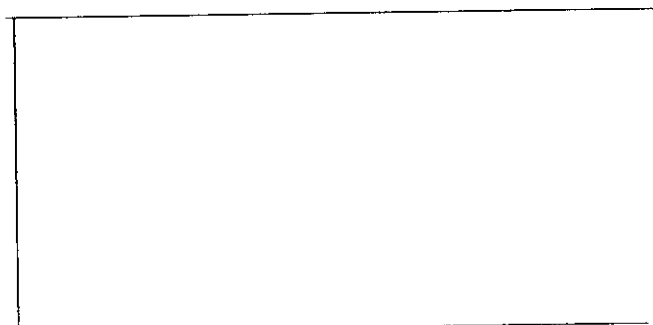
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/23/95** TIME COMPLETED **10:00** INTERVIEWER **DA/DC**

1. Address of structure **0034 MAIN STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 1' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
- Stick Sketch of
Positive Finds
- Front of House
8. Comments **SAME BLOCK AS THE LEDDY CENTER.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:02 INTERVIEWER DA/DC

1. Address of structure 0056 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4'
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments SEWER PIPE IS CRACKED.

DISTRICT

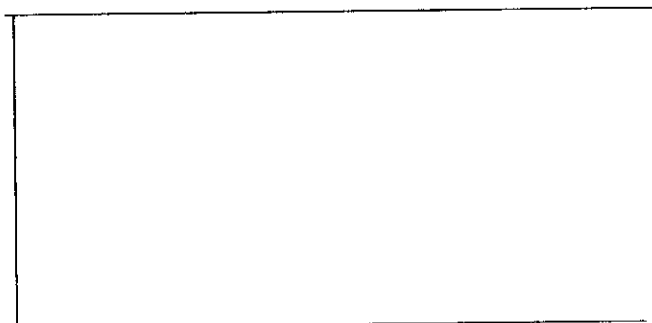
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 11:35 INTERVIEWER DA/DC

1. Address of structure 0057 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 2.5'
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

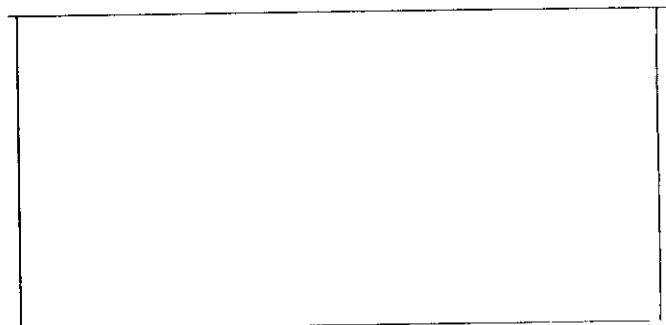
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **110:46** INTERVIEWER **DA/DC**

1. Address of structure **0072 MAIN STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **5'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
(X) Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments **POOL IN YARD, WASHING MACHINE DRAINS INTO SUMP PIT THEN IS PUMPED INTO SEWER.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 11:47 INTERVIEWER DA/DC

1. Address of structure 0076 MAIN STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()
- If YES, where is the water discharged?

() Sanitary Sewer () Dry Well

() Storm Sewer () Ground Surface

() Other

5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout

Basement Drain

Open Pipe

Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
- NOTE: sketch which leaders connected.

7. Outside House
- Stick Sketch of
Positive Finds

YES NO

() () Roof leaders into ground

() () Yard drain

() () Window well drain

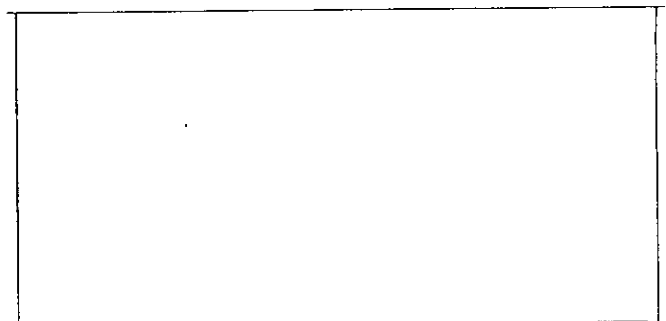
() () Stair well drain

() () Driveway drain

Points of Discharge

()

() Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 10:30 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:31 INTERVIEWER DA/DC

1. Address of structure 0082 MAIN STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe
Basement Drain Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	()
()	()
()	()
()	()
()	()

Roof leaders into ground
Yard drain
Window well drain
Stair well drain
Driveway drain

Points of Discharge
()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments SECOND CALL MADE ON 8/28/95 AT 6:00 PM.

DISTRICT

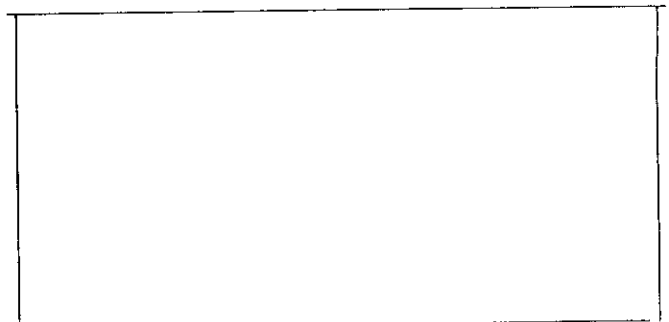
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **10:29** INTERVIEWER **DA/DC**

1. Address of structure **0084 MAIN STREET**
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
8. Comments **TENANT UPSTAIRS SAID SHE COULD NOT LET US IN, THE OWNER LIVES DOWN STAIRS. SECOND CALL MADE ON 8/28/95 AT 5:58 PM.**

Stick Sketch of
Positive Finds



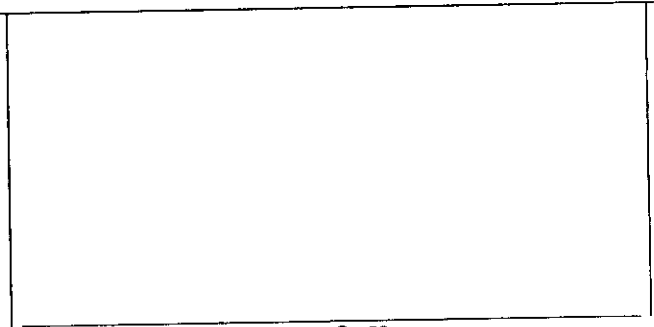
Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **12:20** INTERVIEWER **DA/DC**

1. Address of structure **0087 MAIN STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **4.5'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments **FRENCH DRAIN.**
- Stick Sketch of
Positive Finds
- 
- Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:28 INTERVIEWER DA/DC

1. Address of structure 0088 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

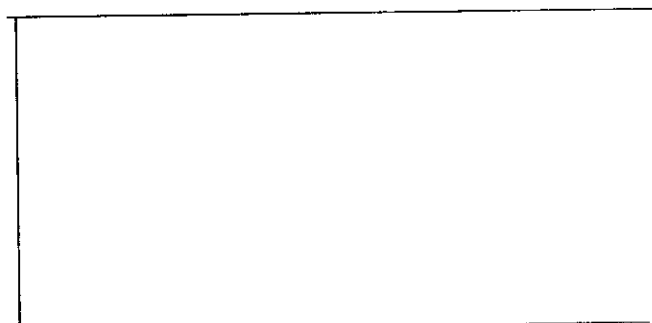
7. Outside House
- Stick Sketch of
Positive Finds

- YES NO
- (X) () Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- (X) Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:28 INTERVIEWER DA/DC

1. Address of structure 0089 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5'
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments WHITE HOUSE WITH BIG WINDOW IN FRONT, BETWEEN 95 AND 87 MAIN STREET.

DISTRICT

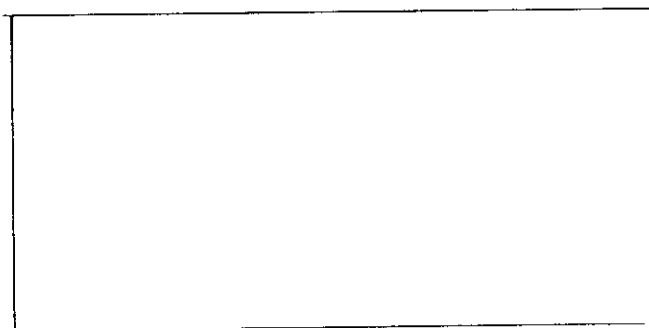
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:25 INTERVIEWER DA/DC

1. Address of structure 0095 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:25 INTERVIEWER DA/DC

1. Address of structure 0096 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5'
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

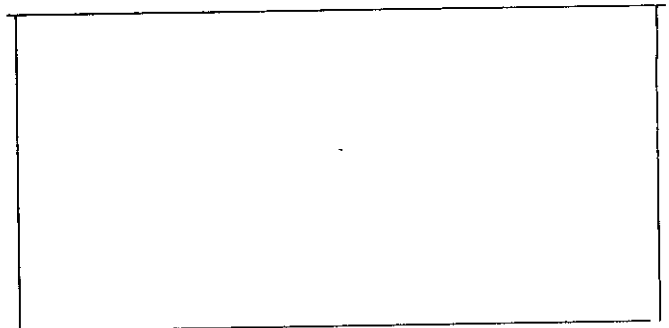
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 5:56

INTERVIEWER DA/DC

1. Address of structure 0100 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
(X) Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

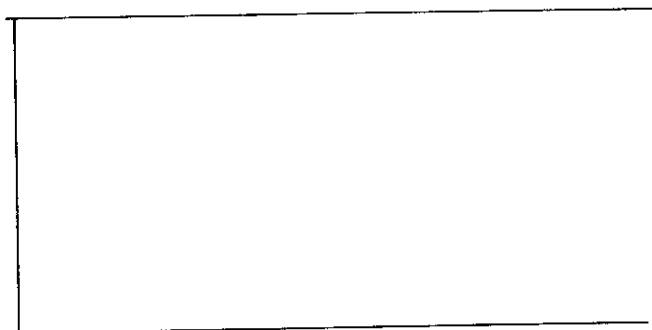
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments DIRT FLOOR.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

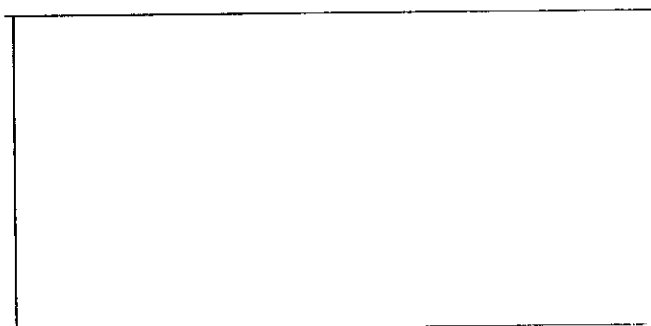
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:20 INTERVIEWER DA/DC

1. Address of structure 0106 MAIN STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments VERY OLD WOMEN, SHE DIDN'T WANT US TO GO IN THE BASEMENT.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

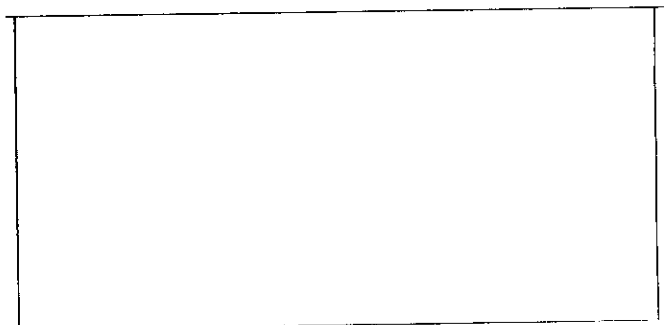
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/23/95** TIME COMPLETED **10:13** INTERVIEWER **DA/DC**

1. Address of structure **0109 MAIN STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments **SLAB FOUNDATION.**

Stick Sketch of
Positive Finds



Front of House

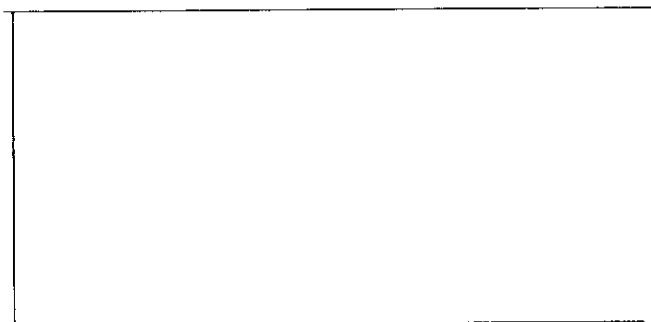
DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 5:50 INTERVIEWER DA/DC

1. Address of structure 0110 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House Stick Sketch of Positive Finds
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments DIRT BASEMENT.



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:34 INTERVIEWER DA/DC

1. Address of structure 0117 MAIN STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?

() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other

5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe
Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.

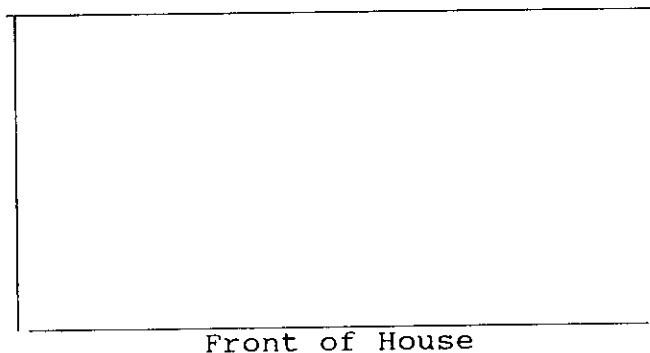
7. Outside House Stick Sketch of
Positive Finds

YES NO
() (X) Roof leaders into
ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain

Points of Discharge

()
() Unknown

8. Comments OWNER STATED, NO BASEMENT.



DISTRICT

CARD LEFT
TIME

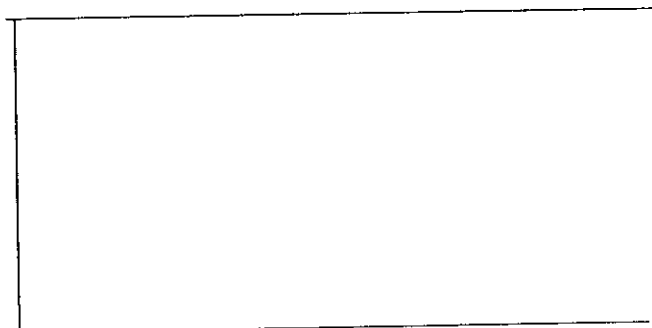
CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 9:49

INTERVIEWER DA/DC

1. Address of structure 0131 MAIN STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments DR. GUSTAVSON, NEXT DOOR TO LEDDY CENTER.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **12:57** INTERVIEWER **DA/DC**

1. Address of structure **0144 MAIN STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

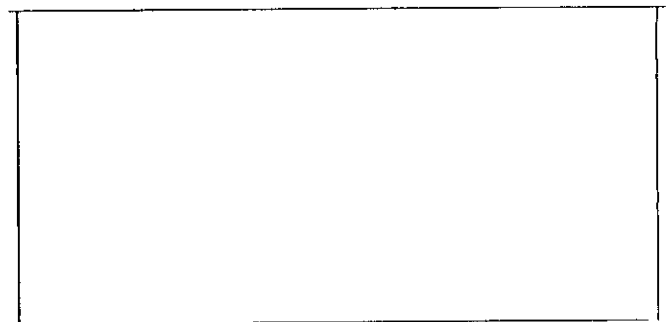
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments **SLAB FOUNDATION.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:59 INTERVIEWER DA/DC

1. Address of structure 0069 MAIN STREET - FECTEAU STORE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

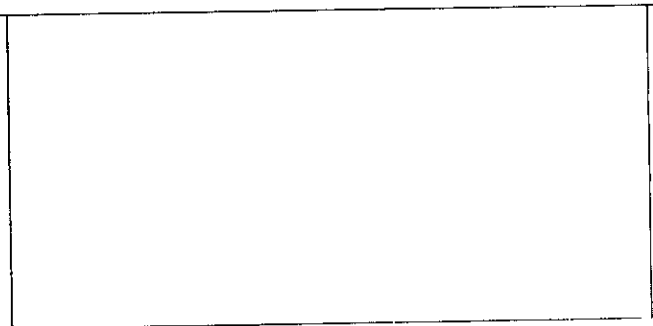
YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()

() Unknown

Stick Sketch of
Positive Finds



Front of House
8. Comments STORE REFRIGERATION COOLERS DRAINING INTO SEWER.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:14 INTERVIEWER DA/DC

1. Address of structure 0105 MAIN STREET - HOUSE AND GUN SHOP
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

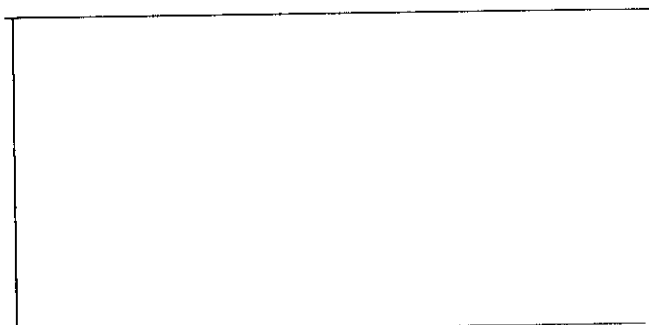
YES	NO	YES	NO
()	()	()	()
()	()	()	()
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X)
()	(X)
()	(X)
()	(X)
()	(X)

Points of Discharge

()
() Unknown
8. Comments SECOND CALL MADE ON 8/28/95 AT 12:29 PM, TENANT TOLD US THE OWNER HAS GONE AWAY AND HE DIDN'T WANT TO LET US IN BASEMENT.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 9:31 INTERVIEWER DA/DC

1. Address of structure 0000 MAIN STREET - LAUNDER CENTER

2. No one home, left card () Not Admitted ().

3. At what level does the sewer pipe exit the structure?

(X) Above the floor level approximately 4'

() Below floor level at unknown depth.

() Below floor level approx. (visible from plumbing access pit)

() Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

() Sanitary Sewer

() Dry Well

() Storm Sewer

() Ground Surface

() Other

5. Can water enter the sanitary sewer via:

YES

NO

YES

NO

() (X) Open Cleanout

() (X) Open Pipe

() (X) Basement Drain

() (X) Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

YES

NO

() (X) Roof leaders into
ground

() (X) Yard drain

() (X) Window well drain

() (X) Stair well drain

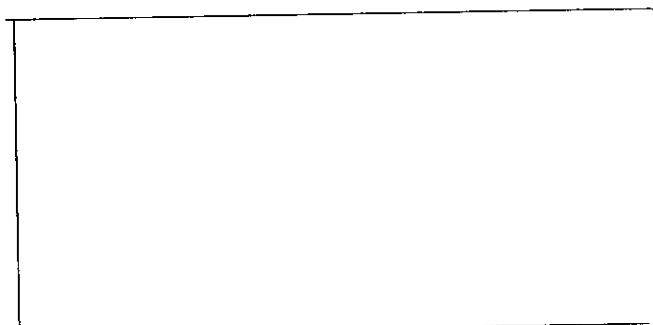
() (X) Driveway drain

Points of Discharge

()

() Unknown

8. Comments



Front of House

DISTRICT

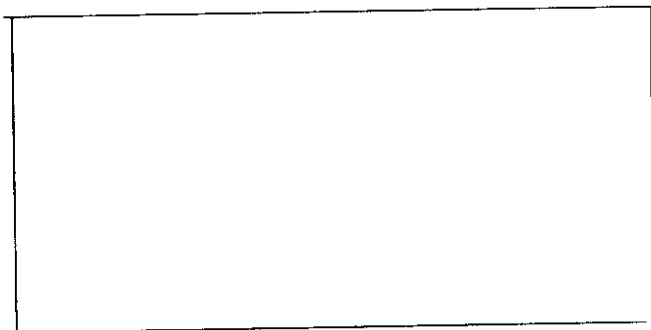
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 9:40 INTERVIEWER DA/DC

1. Address of structure 0133 MAIN STREET - LEDDY CENTER
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:42 INTERVIEWER DA/DC

1. Address of structure 0071 MAIN STREET - POST OFFICE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
Stick Sketch of Positive Finds

Front of House

Points of Discharge

()

() Unknown
8. Comments SLAB FOUNDATION.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:39 INTERVIEWER DA/DC

1. Address of structure 0009 MAPLE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
(X) Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

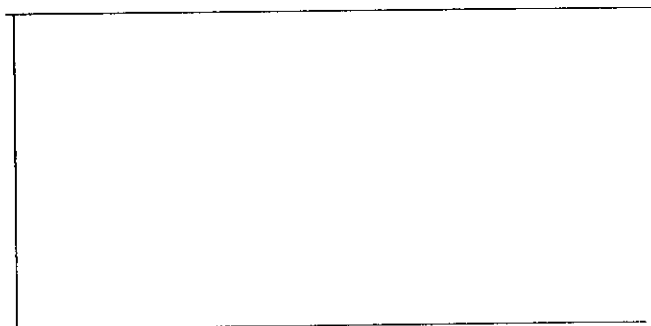
YES	NO	YES	NO
()	()	()	()
()	()	()	()
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) ()
()	(X) ()
()	(X) ()
()	(X) ()
()	(X) ()

Points of Discharge

()
() Unknown
8. Comments TENANT TOLD US THE BASEMENT DOOR IS UNDER RUG ON FLOOR AND SHE CANNOT GET TO IT WITH OUT MOVING THE RUG. THEY HAVE A SEVERE WATER PROBLEM AND HAVE NO PUMP. OWNER IS AWARE OF THE PROBLEM.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

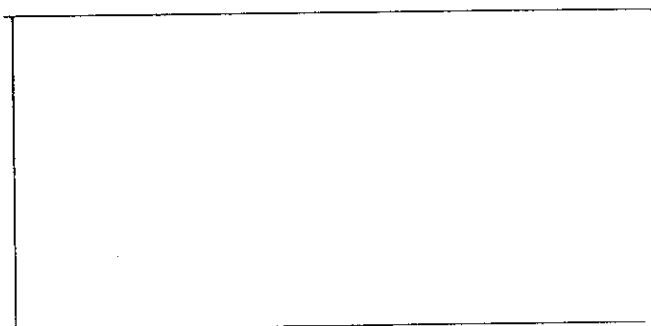
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/23/95 TIME COMPLETED 10:48 INTERVIEWER DA/DC

1. Address of structure 0011 MAPLE STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
8. Comments SECOND CALL MADE ON 8/28/95 AT 4:47 PM.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:16

INTERVIEWER DA/DC

1. Address of structure 0010 MOORE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 4.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

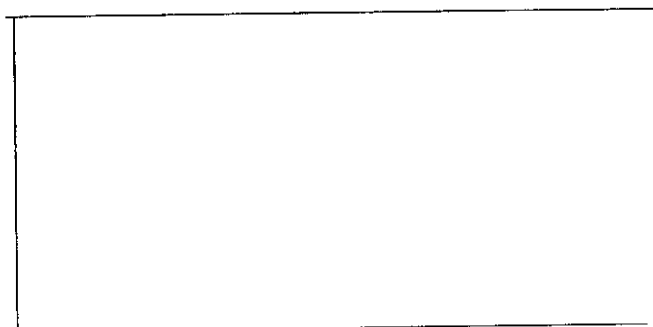
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:41 INTERVIEWER DA/DC

1. Address of structure 0016 MOORE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

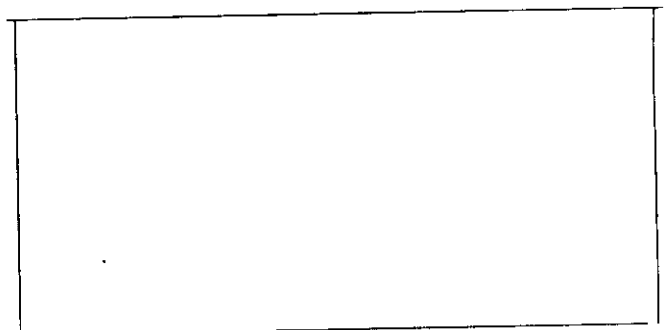
7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

Stick Sketch of
Positive Finds



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **1:39** INTERVIEWER **DA/DC**

1. Address of structure **0017 MOORE STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **4'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

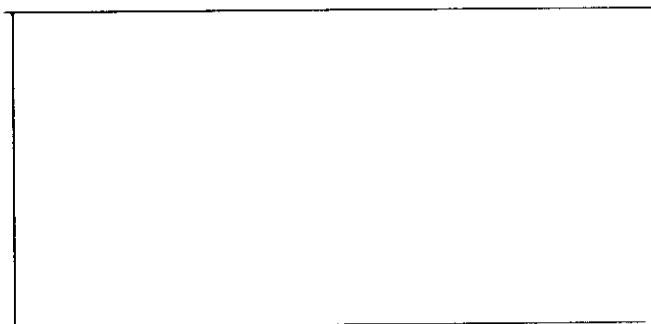
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	(X) Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

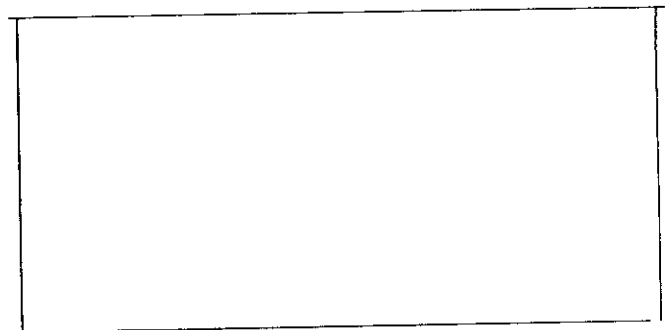
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:44 INTERVIEWER DA/DC

1. Address of structure 0029 MOORE STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments SECOND CALL MADE ON 8/28/95 AT 3:17 PM.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

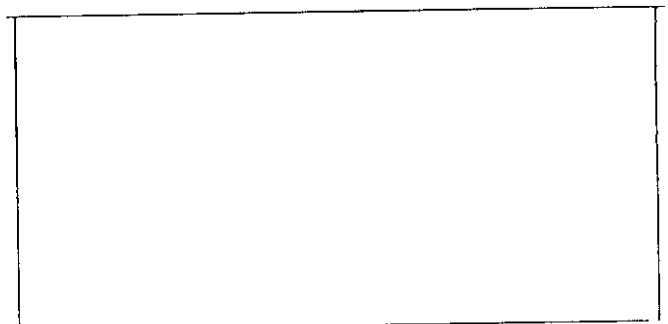
CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:20

INTERVIEWER DA/DC

1. Address of structure 0033 MOORE STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
(X) Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO (X)
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

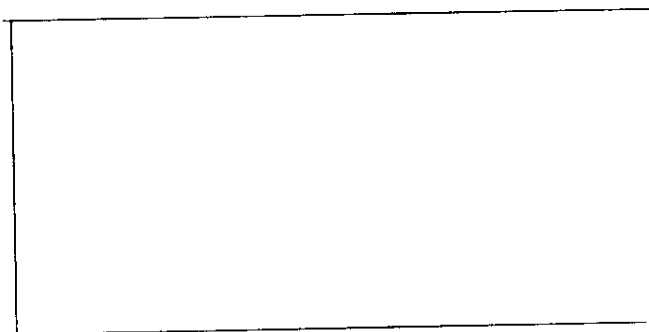
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:58 INTERVIEWER DA/DC

1. Address of structure 0000 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
8. Comments ALSO 6 PLEASANT STREET, BRICK BUILDING BETWEEN BREWITT FUNERAL HOME AND BANK. SECOND CALL MADE ON 8/28/95 AT 5:35 PM. WE DON'T KNOW IF THIS BUILDING IS VACANT.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:16 INTERVIEWER DA/DC

1. Address of structure 0000 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

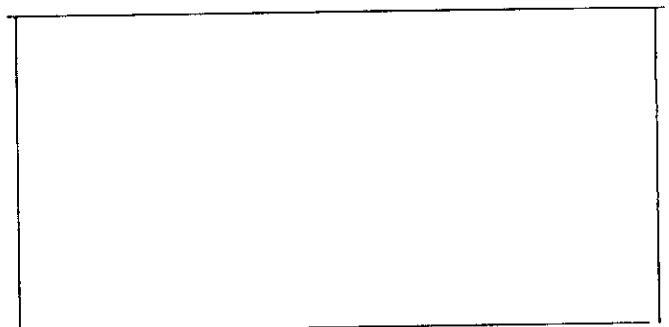
NOTE: sketch which leaders connected.

7. Outside House
- Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments WHITE HOUSE WITH BRICK FRONT AND PINK TRIM, BETWEEN 61 AND 69 PLEASANT ST. NUMBER ON FRONT IS 40 BUT WE ALREADY HAVE A 40, POOL IN BACKYARD. SECOND CALL MADE ON 8/28/95 AT 5:35 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **11:20** INTERVIEWER **DA/DC**

1. Address of structure **0001 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately **4'**
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- (X) Other **HOSE NOT HOOKED UP AT THIS TIME.**

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments **DIRT BASEMENT, SUMP PIT FILLED WITH WATER. HOSE LONG ENOUGH TO REACH CEANOUT. DYE TEST RECOMENDED.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **11:28** INTERVIEWER **DA/DC**

1. Address of structure **0003 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **4'** .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

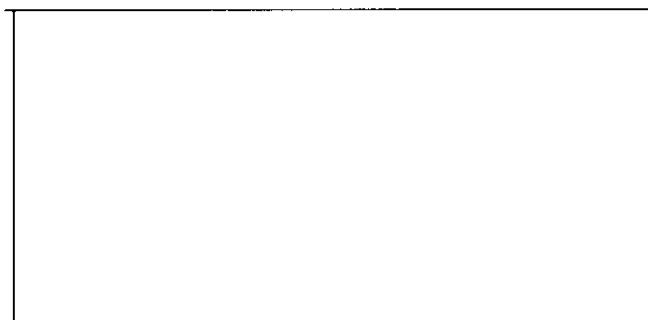
YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
(X)	() Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()
(X) Unknown
8. Comments **ALSO 5 PLEASANT STREET, GRAVEL BASEMENT.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 11:23 INTERVIEWER DA/DC

1. Address of structure 0006 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

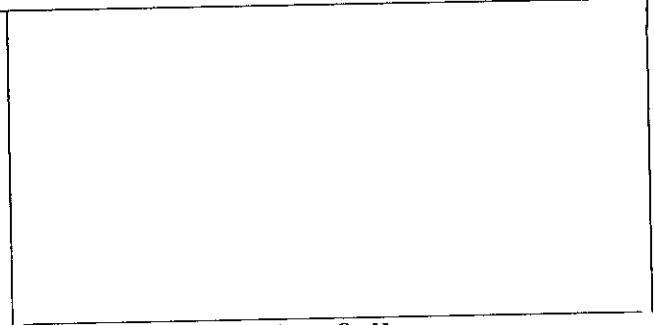
8. Comments SECOND CALL MADE ON 8/28/95 AT 2:57 PM. HOUSE IS BETWEEN 1 AND 3 PLEASANT STREET.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **11:35** INTERVIEWER **DA/DC**

1. Address of structure **0007 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately **4'**
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
Stick Sketch of Positive Finds

Front of House
8. Comments **TWO SEWER PIPES EXITING, LONG HOSE FROM SUMP PUMP COULD REACH CLEANOUT.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **12:47** INTERVIEWER **DA/DC**

1. Address of structure **0017 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately **5.5'**
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

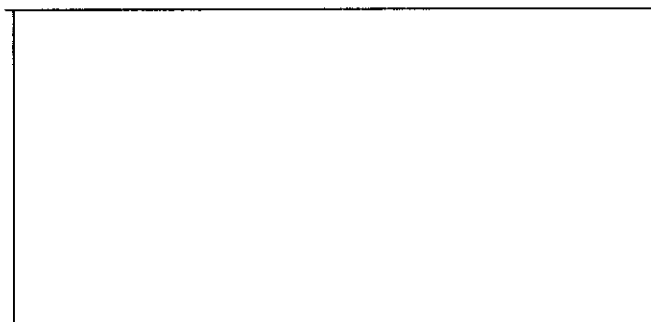
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments **POOL IN YARD.**

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 11:36 INTERVIEWER DA/DC

1. Address of structure 0019 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:05 PM, WHITE HOUSE WITH BLACK TRIM, APPEARS VACANT.

DISTRICT

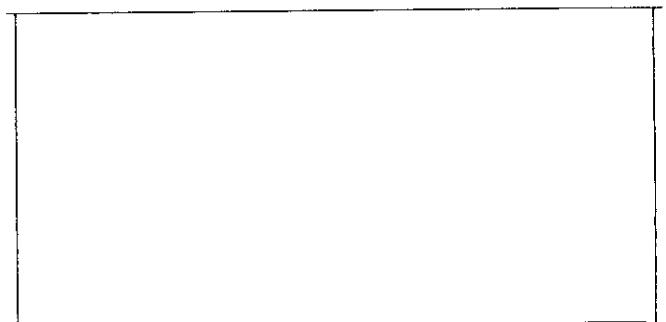
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:40 INTERVIEWER DA/DC

1. Address of structure 0023 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
(X) Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

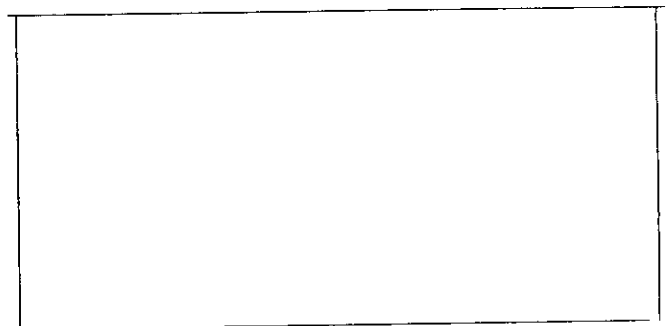
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:35 INTERVIEWER DA/DC

1. Address of structure 0027 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments DIRT BASEMENT.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 11:44 INTERVIEWER DA/DC

1. Address of structure 0028 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

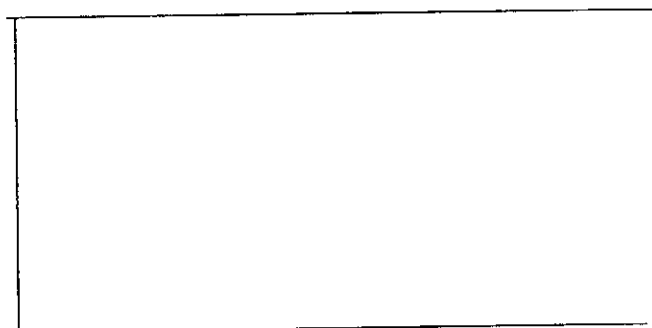
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:00 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 11:49 INTERVIEWER DA/DC

1. Address of structure 0032 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	(X) Open Cleanout	()	(X) Open Pipe
()	(X) Basement Drain	()	(X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House

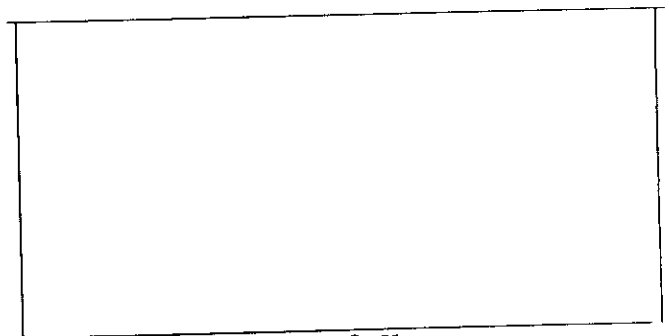
YES	NO
(X)	() Roof leaders into ground
()	(X) Yard drain
()	(X) Window well drain
()	(X) Stair well drain
()	(X) Driveway drain

Points of Discharge

()

(X) Unknown
8. Comments

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **11:51** INTERVIEWER **DA/DC**

1. Address of structure **0040 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately **5'**
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

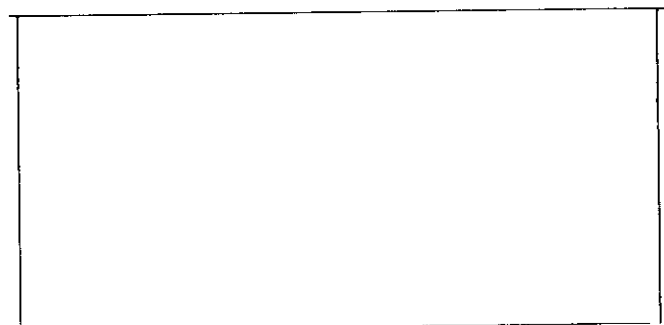
Stick Sketch of
Positive Finds

7. Outside House

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:25 INTERVIEWER DA/DC

1. Address of structure 0043 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3'
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- (X) Other NOT HOOKED UP AT THIS TIME.

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

Stick Sketch of
Positive Finds

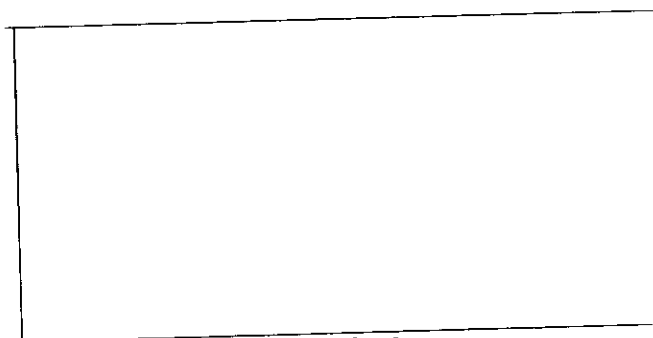
7. Outside House

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/22/95** TIME COMPLETED **12:20** INTERVIEWER **DA/DC**

1. Address of structure **0045 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately **4.5'**
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

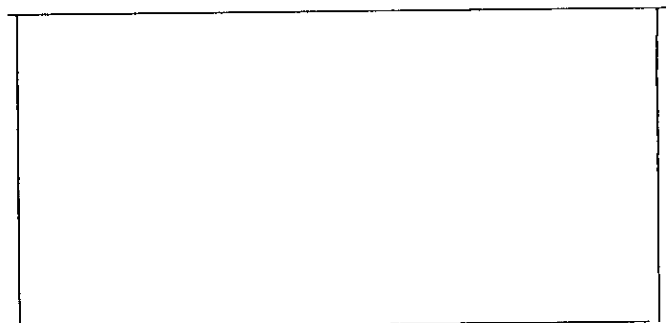
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- (X) () Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- (X) Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 11:55 INTERVIEWER DA/DC

1. Address of structure 0048 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO
()	()	()	()
()	()	()	()

Open Cleanout Open Pipe
Basement Drain Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
(X)	()
()	(X)
()	(X)
()	(X)
()	(X)

Roof leaders into ground
Yard drain
Window well drain
Stair well drain
Driveway drain

Points of Discharge
()
(X) Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments SECOND CALL MADE ON 8/28/95 AT 2:40 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:15 INTERVIEWER DA/DC

1. Address of structure 0049 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments DIRT BASEMENT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:10 INTERVIEWER DA/DC

1. Address of structure 0059 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

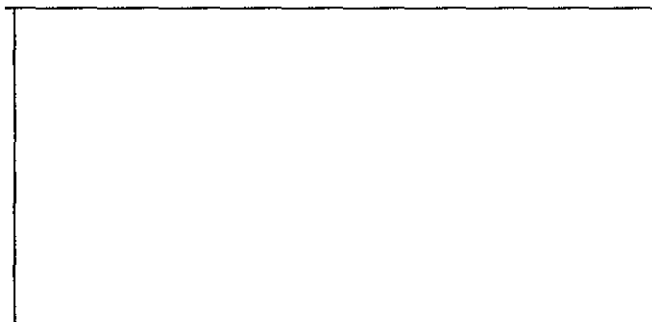
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:02 INTERVIEWER DA/DC

1. Address of structure 0061 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

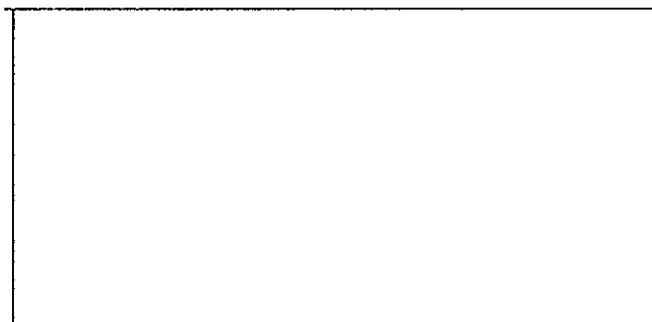
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 PM AT 2:45 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 2:34 INTERVIEWER DA/DC

1. Address of structure 0064 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 5:34 INTERVIEWER DA/DC

1. Address of structure 0069 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

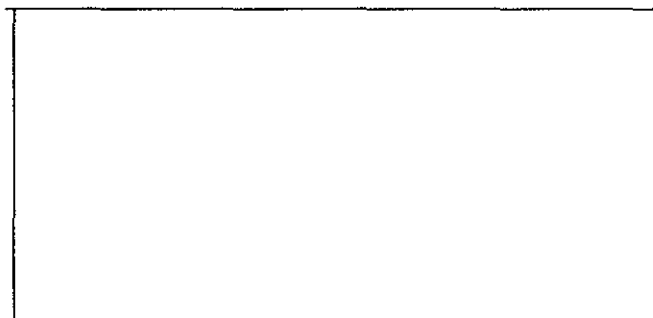
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 2:13 INTERVIEWER DA/DC

1. Address of structure 0075 PLEASANT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 5:29 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:24 INTERVIEWER DA/DC

1. Address of structure 0084 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

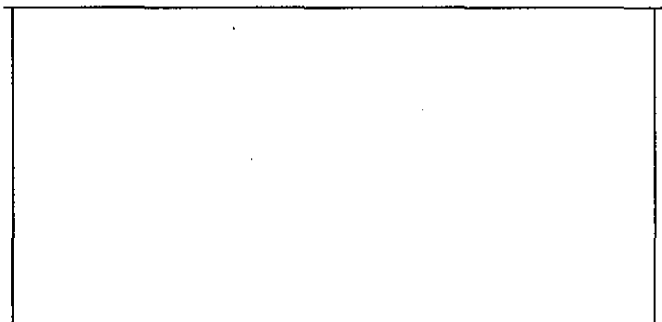
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments NOT HOOKED UP TO SEWER.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE **8/28/95** TIME COMPLETED **1:23** INTERVIEWER **DA/DC**

1. Address of structure **0092 PLEASANT STREET**
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

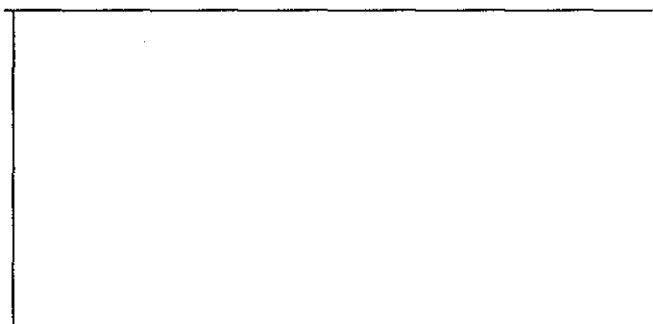
YES	NO	YES	NO
()	()	()	()
()	()	()	()
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO
()	()
()	()
()	()
()	()
()	()

Points of Discharge

()
() Unknown
8. Comments **NOT HOOKED UP TO SEWER.**

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:21 INTERVIEWER DA/DC

1. Address of structure 0095 PLEASANT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 6' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

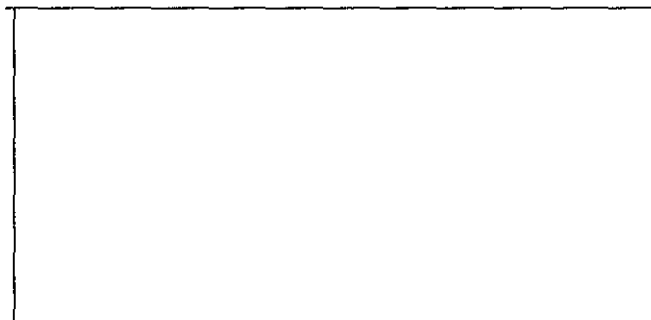
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:55 INTERVIEWER DA/DC

1. Address of structure 0008 PLEASANT STREET - BREWITT FUNERAL HOME .
2. No one home, left card () Not Admitted () .
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

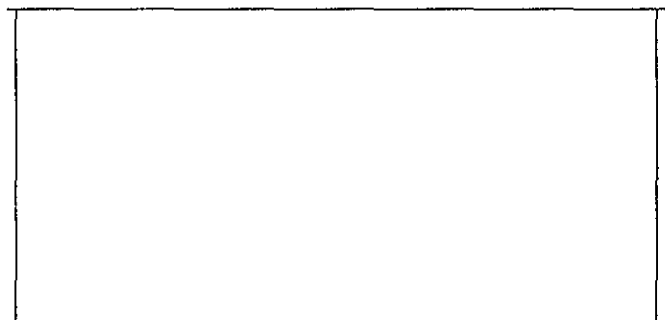
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 12:29 INTERVIEWER DA/DC

1. Address of structure 0020 PLEASANT STREET - STILSON AUTO
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments MAN DIDN'T REALY WANT TO TALK TO US, SLAB FOUNTAION.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:13 INTERVIEWER DA/DC

1. Address of structure 0014 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

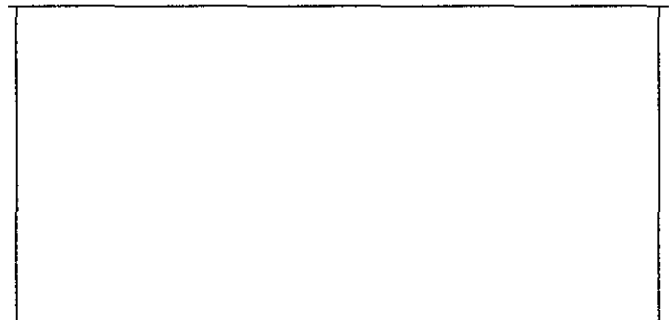
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments SLAB FOUNDATION.



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 12:57 INTERVIEWER DA/DC

1. Address of structure 0019 RAILROAD AVUNUE
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

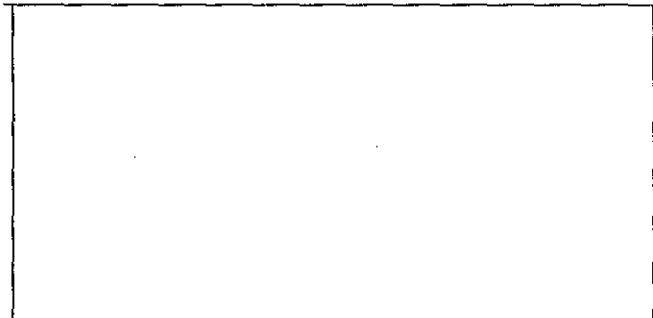
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments OPENED THE BLIND TO SEE US AND WOULD NOT OPEN THE DOOR.

DISTRICT

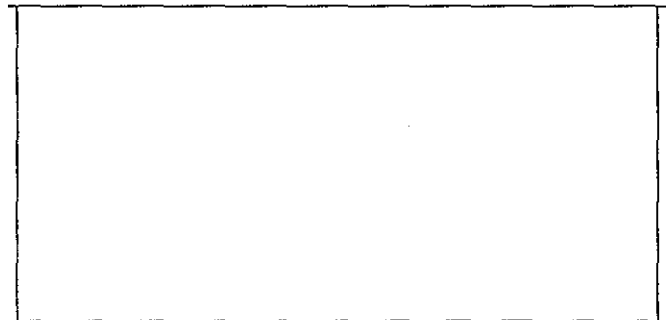
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:10 INTERVIEWER DA/DC

1. Address of structure 0020 RAILROAD AVUNUE
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
8. Comments SECOND CALL MADE ON 8/28/95 AT 5:20 PM.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:52 INTERVIEWER DA/DC

1. Address of structure 0022 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately ON .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

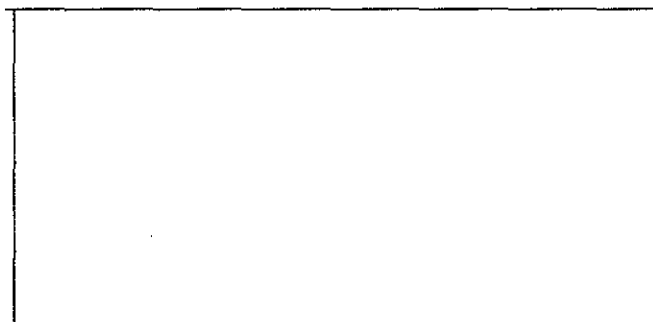
Stick Sketch of
Positive Finds

7. Outside House

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments DIRT BASEMENT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:55 INTERVIEWER DA/DC

1. Address of structure 0023 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (X) Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

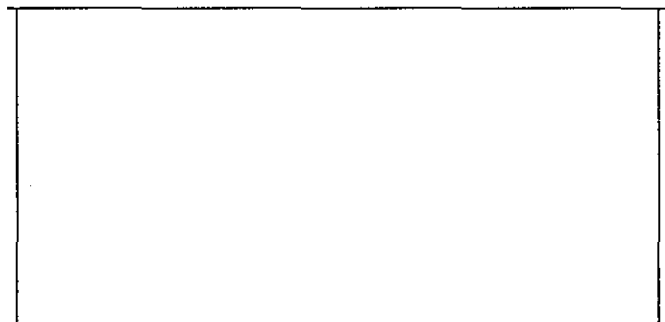
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|------------------------------|
| () | () Roof leaders into ground |
| () | () Yard drain |
| () | () Window well drain |
| () | () Stair well drain |
| () | () Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments CRAWL SPACE, ACCESS OBSTRUCTED.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:50 INTERVIEWER DA/DC

1. Address of structure 0027 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (X) Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

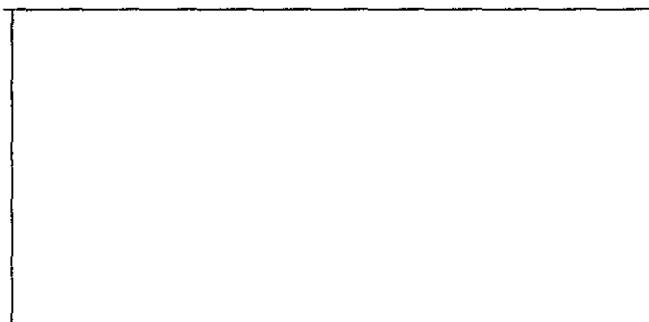
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments CRAWL SPACE, ACCESS OBSTRUCTED.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:05 INTERVIEWER DA/DC

1. Address of structure 0035 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

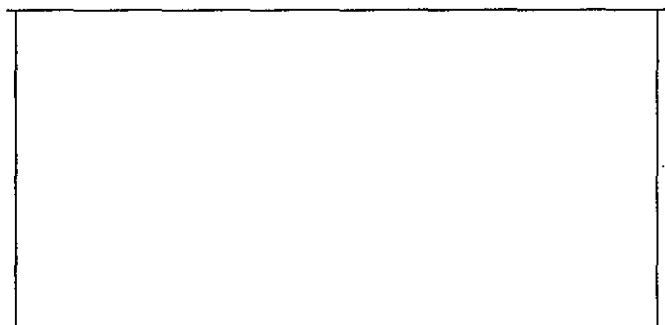
7. Outside House
- Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments DIRT BASEMENT.



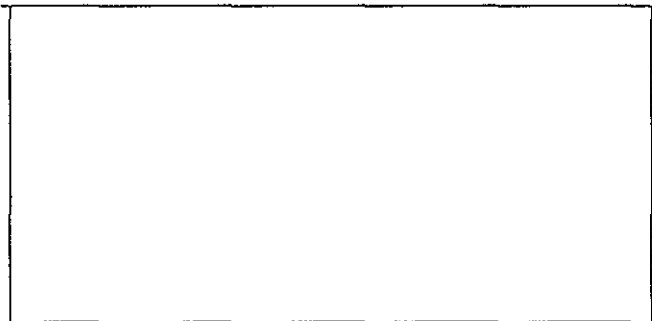
Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 5:05 INTERVIEWER DA/DC

1. Address of structure 0038 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
(X) Other UNKNOWN
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout () (X) Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
Stick Sketch of Positive Finds

Front of House
8. Comments THERE WAS NO HOSE CONNECTED TO PUMP. TENANT TOLD US THAT THE PUMP RUNS ALL THE TIME, UNKNOWN DISCHARGE POINT. COULD DEFINITELY REACH SEWER PIPE, POSSIBLE SUSPECT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:56 INTERVIEWER DA/DC

1. Address of structure 0042 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3'
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

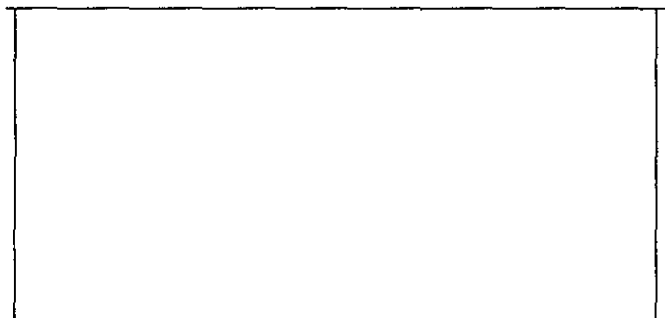
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- (X) () Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- (X) Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:22 INTERVIEWER DA/DC

1. Address of structure 0067 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (X) Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

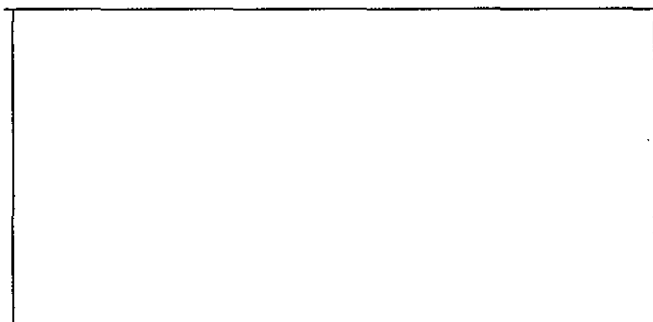
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments CRAWL SPACE, ACCESS OBSTRUCTED.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:54 INTERVIEWER DA/DC

1. Address of structure 0074 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- (X) Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

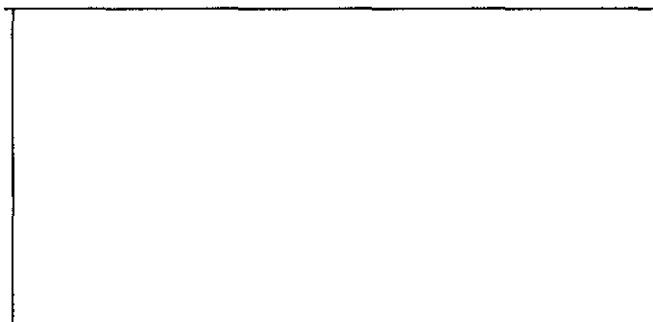
Stick Sketch of
Positive Finds

7. Outside House

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:45 INTERVIEWER DA/DC

1. Address of structure 0098 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

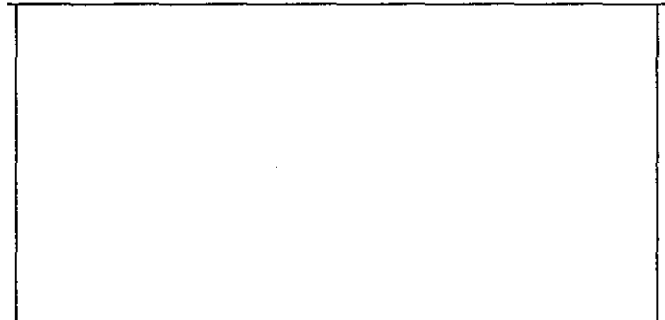
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:42 INTERVIEWER DA/DC

1. Address of structure 0100 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3'
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- (X) Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

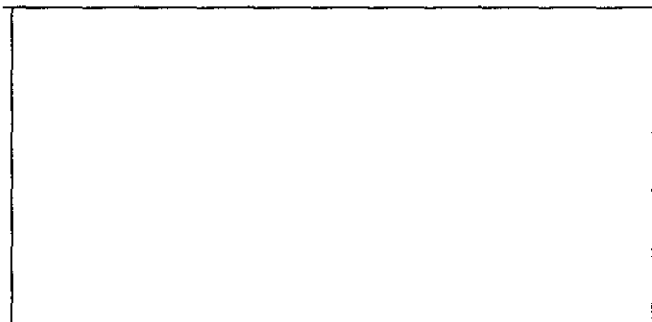
Stick Sketch of
Positive Finds

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:39 INTERVIEWER DA/DC

1. Address of structure 0104 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 1.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- (X) Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

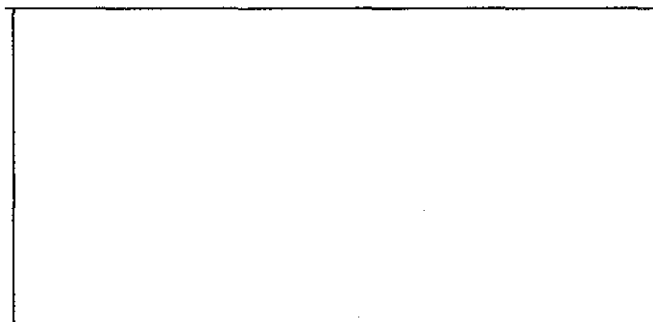
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:30 INTERVIEWER DA/DC

1. Address of structure 0108 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

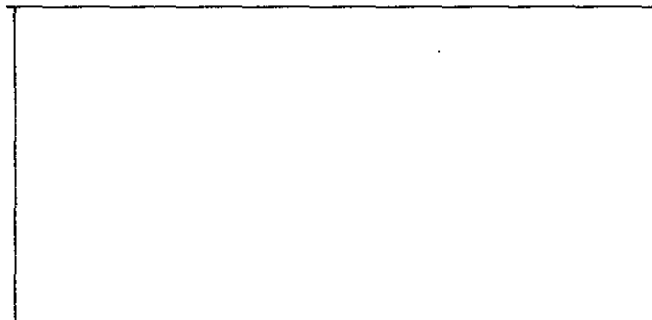
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:32 INTERVIEWER DA/DC

1. Address of structure 0109 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

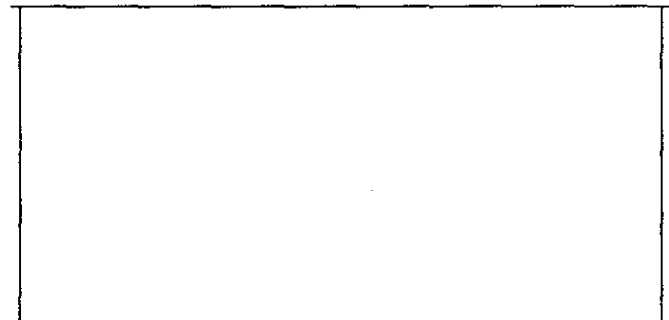
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments DEHUMIDIFIER DRAINS IN TO SINK.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:45 INTERVIEWER DA/DC

1. Address of structure 0110 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 1' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

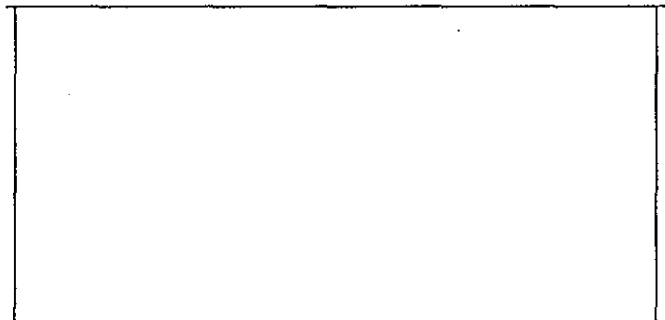
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments POOL IN YARD.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:38 INTERVIEWER DA/DC

1. Address of structure 0112 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

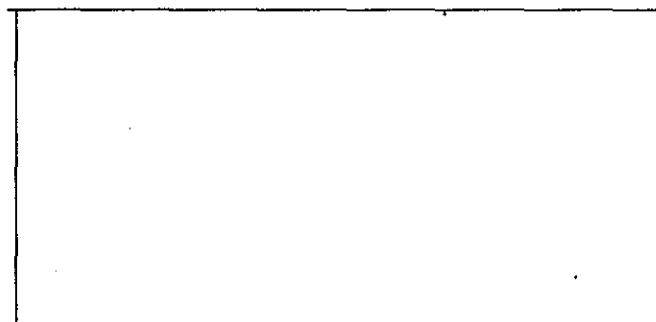
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:33 INTERVIEWER DA/DC

1. Address of structure 0113 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 2' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (.) Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

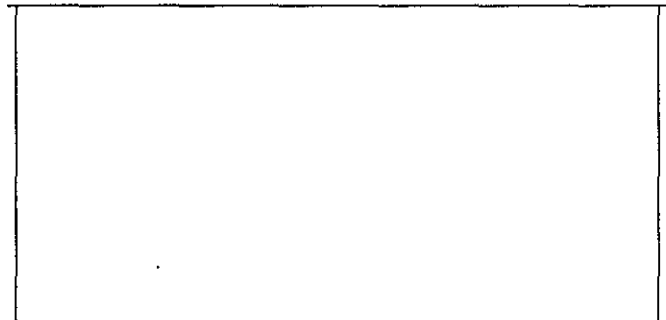
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments GRAVEL BASEMENT.

DISTRICT

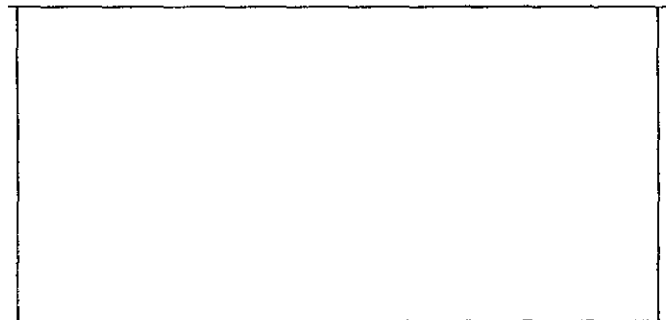
CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:29 INTERVIEWER DA/DC

1. Address of structure 0116 RAILROAD AVUNUE
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
8. Comments SECOND CALL MADE ON 8/28/95 AT 11:25 AM, CAR IN DRIVEWAY.

Stick Sketch of
Positive Finds



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:23 INTERVIEWER DA/DC

1. Address of structure 0126 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5'8" .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|---------------------|-----|----------------|
| YES | NO | YES | NO |
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

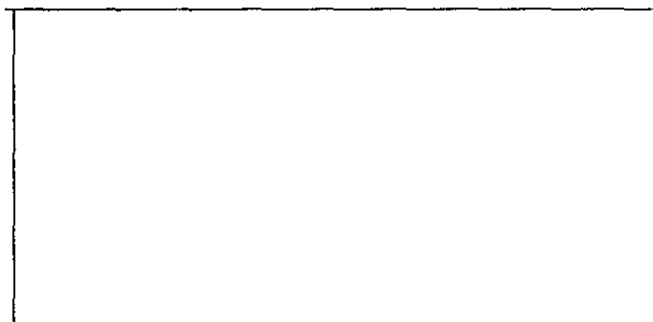
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|-------------------------------|
| YES | NO |
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:46 INTERVIEWER DA/DC

1. Address of structure 0129 RAILROAD AVUNUE
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|--------------------|-----|---------------|
| YES | NO | YES | NO |
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

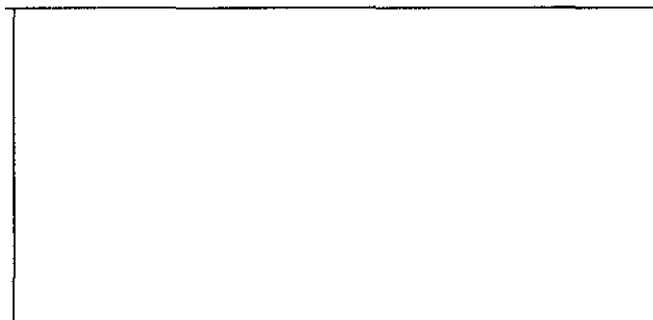
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|------------------------------|
| YES | NO |
| () | () Roof leaders into ground |
| () | () Yard drain |
| () | () Window well drain |
| () | () Stair well drain |
| () | () Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 11:20 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 11:18 INTERVIEWER DA/DC

1. Address of structure 0134 RAILROAD AVUNUE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

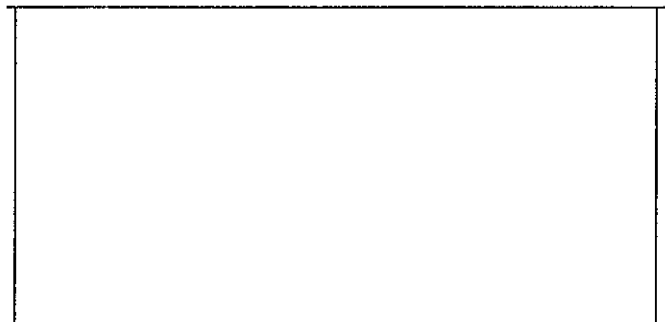
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:24 INTERVIEWER DA/DC

1. Address of structure 0140 RAILROAD AVUNUE
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|--------------------|-----|---------------|
| YES | NO | YES | NO |
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

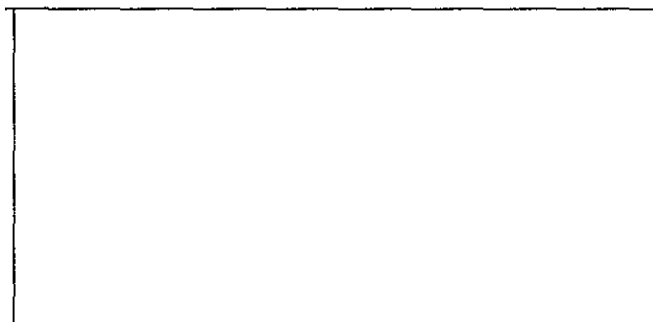
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|------------------------------|
| YES | NO |
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 11:14 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 1:48 INTERVIEWER DA/DC

1. Address of structure 0000 ROUTE 27 - HARLOW'S BAKERY
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|---------------------|-----|----------------|
| YES | NO | YES | NO |
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

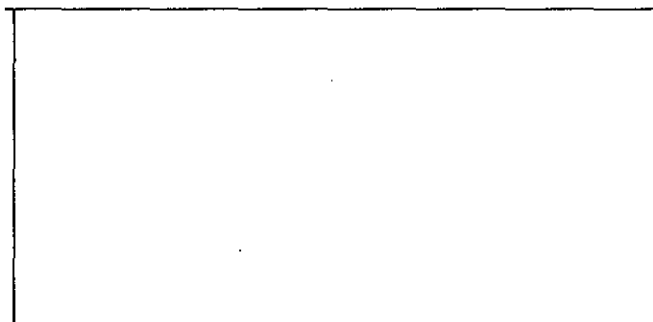
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|-------------------------------|
| YES | NO |
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:27 INTERVIEWER DA/DC

1. Address of structure 0007 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

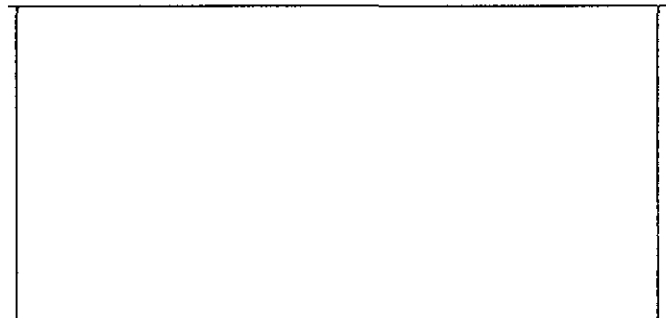
Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:58 INTERVIEWER DA/DC

1. Address of structure 0018 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

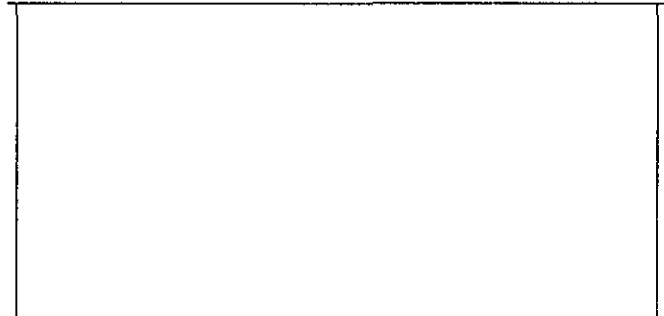
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:50 INTERVIEWER DA/DC

1. Address of structure 0021 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments NOT HOOKED UP TO SEWER.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 6:13 INTERVIEWER DA/DC

1. Address of structure 0032 ST. LAURENT STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:

YES	NO	YES	NO	
()	()	Open Cleanout	()	Open Pipe
()	()	Basement Drain	()	Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House

YES	NO	
()	()	Roof leaders into ground
()	()	Yard drain
()	()	Window well drain
()	()	Stair well drain
()	()	Driveway drain

Points of Discharge

()
() Unknown

Stick Sketch of
Positive Finds

Front of House
8. Comments ON OUR FIRST CALL WE WERE TOLD TO COME BACK ANOTHER TIME.
SECOND CALL MADE ON 8/28/95 10:40 AM, NO ONE HOME.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:34 INTERVIEWER DA/DC

1. Address of structure 0035 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

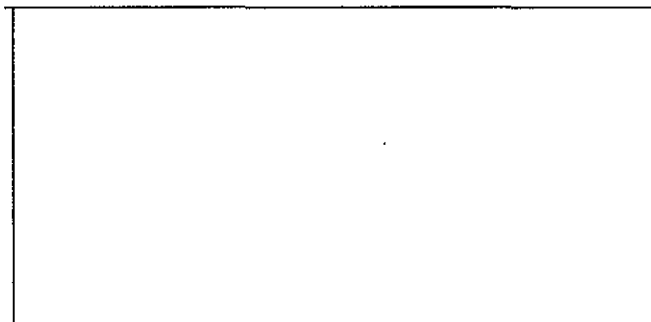
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments DIRT BASEMENT.



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:36 INTERVIEWER DA/DC

1. Address of structure 0037 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

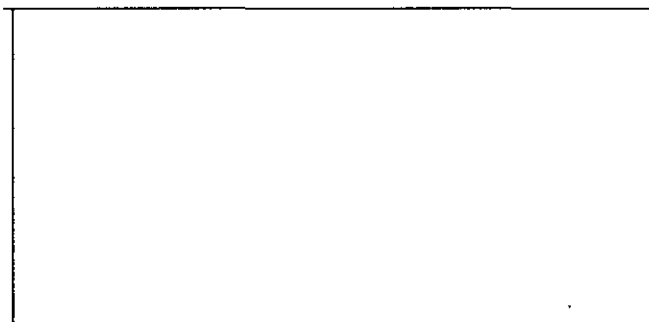
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:45 INTERVIEWER DA/DC

1. Address of structure 0041 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- (X) Other OLD SEPTIC SYSTEM.

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

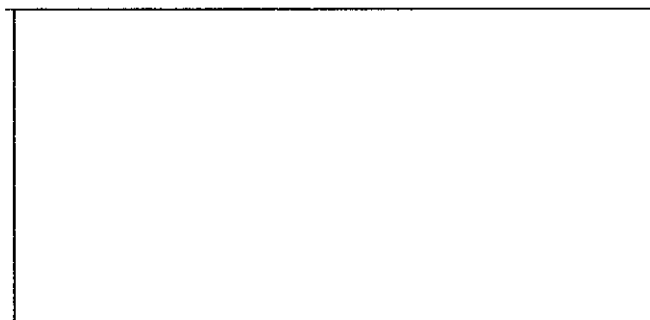
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:08 INTERVIEWER DA/DC

1. Address of structure 0045 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (X) Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

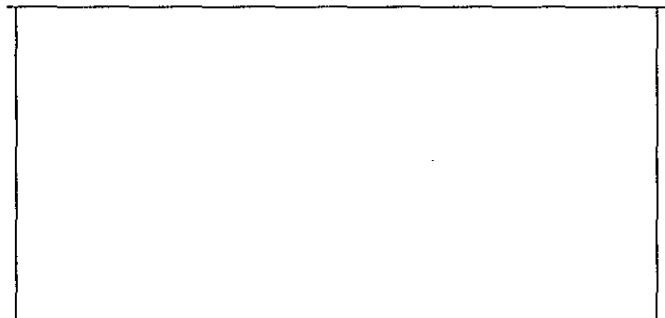
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SEWER PIPES LOCATED IN CRAWL SPACE AND WE CAN NOT ACCESS.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 4:03 INTERVIEWER DA/DC

1. Address of structure 0047 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

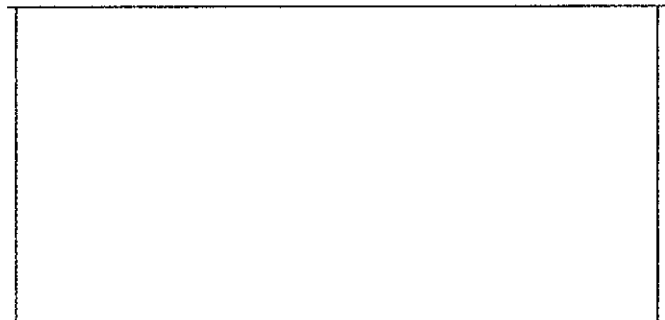
Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown

8. Comments POOL IN YARD.



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:51 INTERVIEWER DA/DC

1. Address of structure 0053 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 2' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

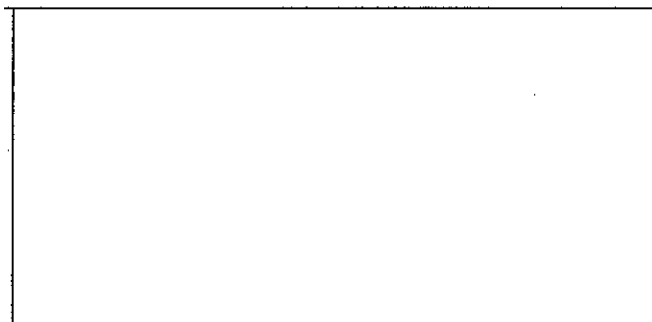
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:53 INTERVIEWER DA/DC

1. Address of structure 0057 ST. LAURENT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

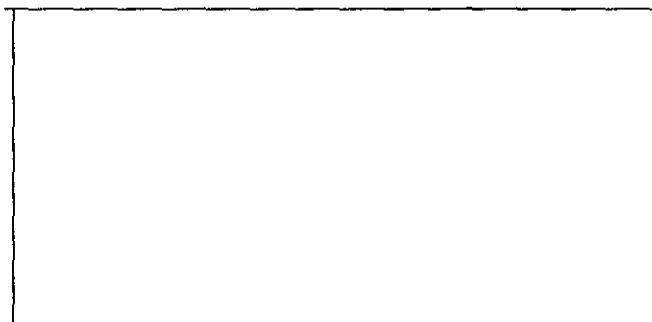
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 10:45 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:26 INTERVIEWER DA/DC

1. Address of structure 0058 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

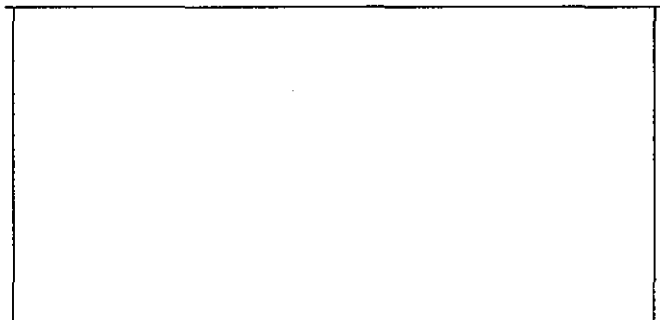
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments POOL IN YARD.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:23 INTERVIEWER DA/DC

1. Address of structure 0060 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 1.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

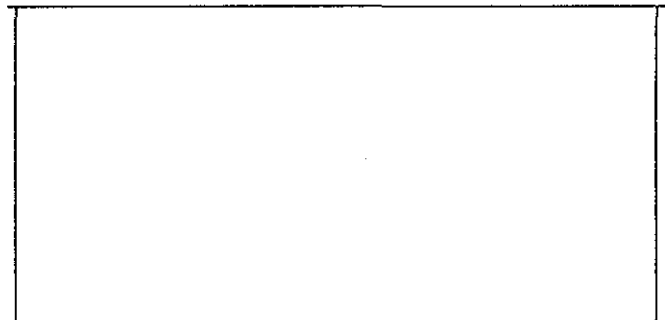
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments GRAVEL BASEMENT.



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:54 INTERVIEWER DA/DC

1. Address of structure 0061 ST. LAURENT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

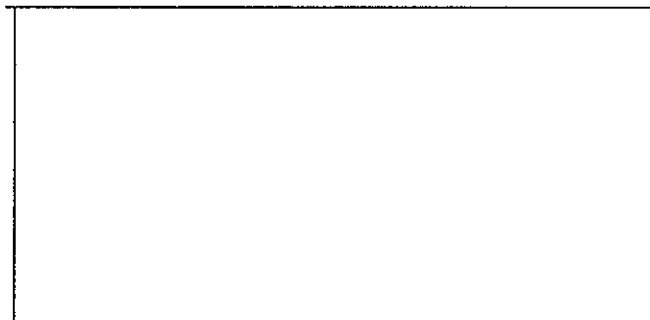
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 10:46 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 10:53 INTERVIEWER DA/DC

1. Address of structure 0065 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|------|-----|------|
| () | (X) | () | (X) |
| () | (X) | () | (X) |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

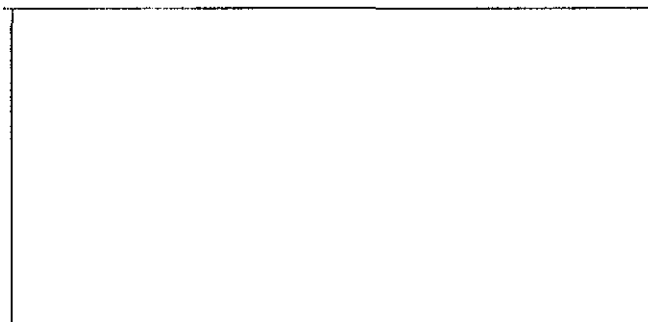
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|------|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments OLD PIPE OPENED ON GROUND, LEADS TO OUTSIDE GROUND.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:00 INTERVIEWER DA/DC

1. Address of structure 0069 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

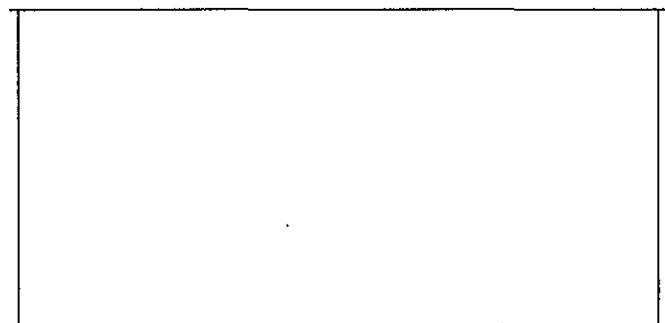
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:19 INTERVIEWER DA/DC

1. Address of structure 0072 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
() Storm Sewer (X) Ground Surface
() Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

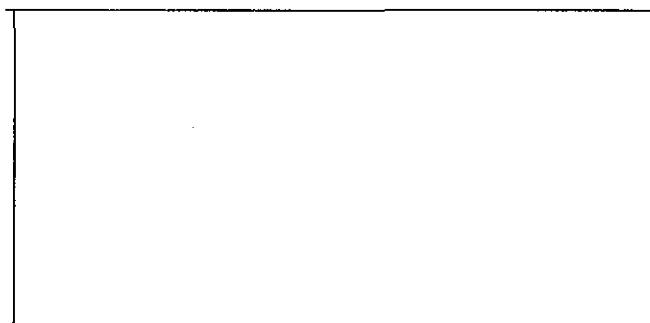
7. Outside House
- Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain

Points of Discharge

- ()
() Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:12 INTERVIEWER DA/DC

1. Address of structure 0076 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

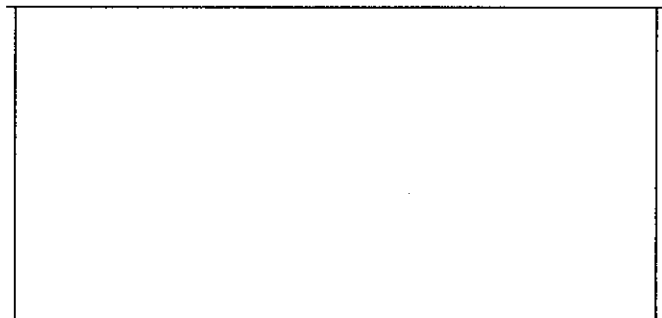
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments BASEMENT DRAIN, DISCHARGE POINT UNKNOWN.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:04 INTERVIEWER DA/DC

1. Address of structure 0077 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

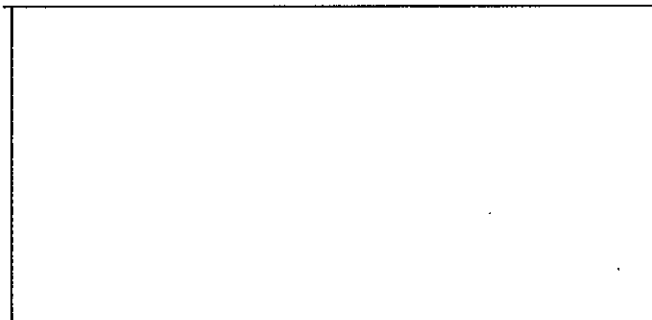
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- (X) () Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- (X) DRYWELL
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:08 INTERVIEWER DA/DC

1. Address of structure 0080 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4.5' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

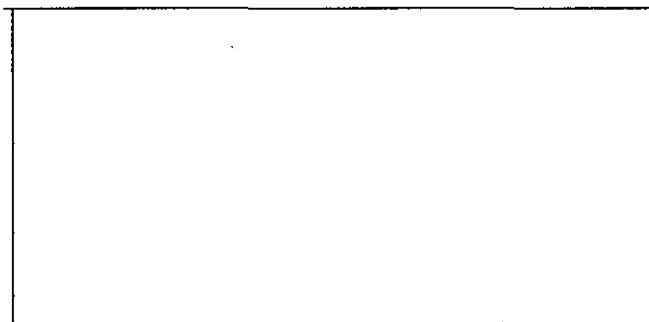
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain

Points of Discharge

- ()
() Unknown



Front of House

8. Comments OLD OPEN PIPE AT FLOOR LEVEL, OWNER DOESN'T KNOW POINT OF DISCHARGE.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:11 INTERVIEWER DA/DC

1. Address of structure 0083 ST. LAURENT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

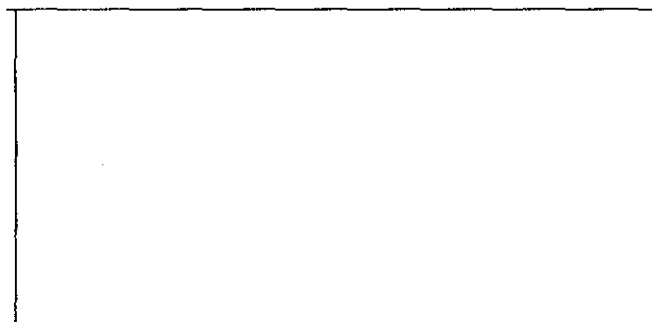
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 11:05 AM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:04 INTERVIEWER DA/DC

1. Address of structure 0084 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

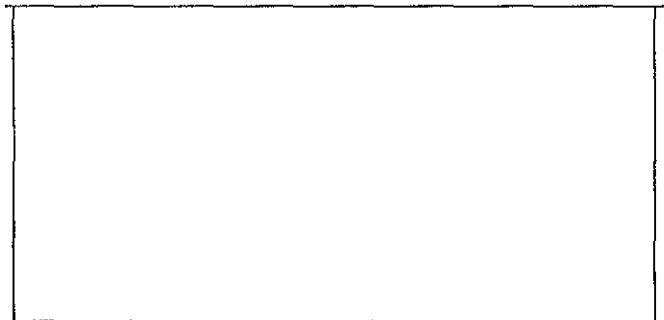
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:17 INTERVIEWER DA/DC

1. Address of structure 0085 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 5'
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 5:00 INTERVIEWER DA/DC

1. Address of structure 0088 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

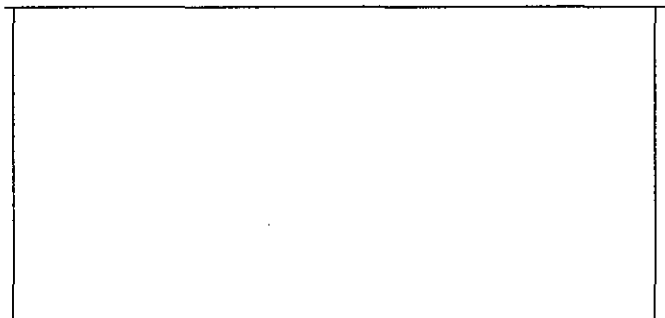
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-------------------------------|
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:14 INTERVIEWER DA/DC

1. Address of structure 0089 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

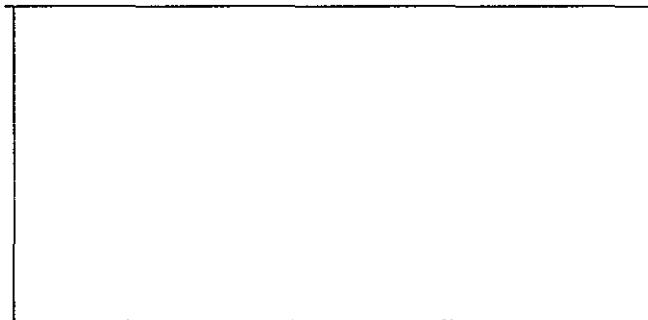
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 3:20 INTERVIEWER DA/DC

1. Address of structure 0091 ST. LAURENT STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|--------------------|-----|---------------|
| YES | NO | YES | NO |
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|------------------------------|
| YES | NO |
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 11:10 AM, TWO CARS IN YARD.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 4:52 INTERVIEWER DA/DC

1. Address of structure 0096 ST. LAURENT STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
(X) Above the floor level approximately 2' .
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|---------------------|-----|----------------|
| YES | NO | YES | NO |
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

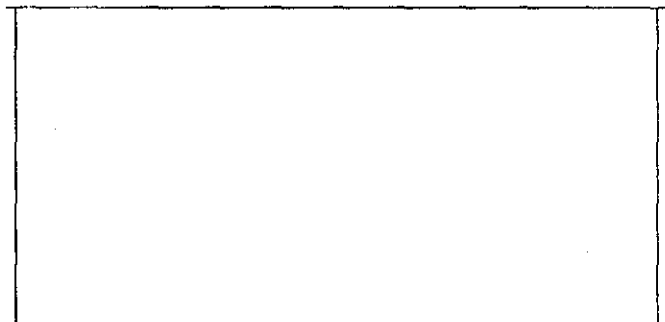
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|-------------------------------|
| YES | NO |
| () | (X) Roof leaders into ground |
| () | (X) Yard drain |
| () | (X) Window well drain |
| () | (X) Stair well drain |
| () | (X) Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:31 INTERVIEWER DA/DC

1. Address of structure 0000 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- | | |
|--------------------|--------------------|
| () Sanitary Sewer | () Dry Well |
| () Storm Sewer | () Ground Surface |
| () Other | |

5. Can water enter the sanitary sewer via:

- | | | | |
|-----|--------------------|-----|---------------|
| YES | NO | YES | NO |
| () | () Open Cleanout | () | () Open Pipe |
| () | () Basement Drain | () | () Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

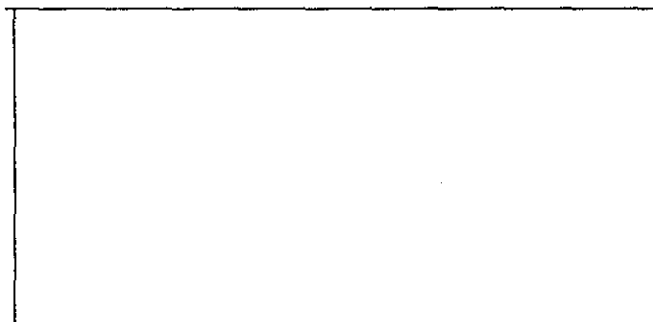
7. Outside House

Stick Sketch of
Positive Finds

- | | |
|-----|------------------------------|
| YES | NO |
| () | () Roof leaders into ground |
| () | () Yard drain |
| () | () Window well drain |
| () | () Stair well drain |
| () | () Driveway drain |

Points of Discharge

- | |
|-------------|
| () |
| () Unknown |



Front of House

8. Comments LARGE WHITE HOUSE WITH BLACK SHUTTERS, BETWEEN 23 AND 33 WATER STREET. SECOND CALL MADE ON 8/28/95 AT 3:11 PM, TRUCK AND CAR IN DRIVEWAY.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:45

INTERVIEWER DA/DC

1. Address of structure 0001 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

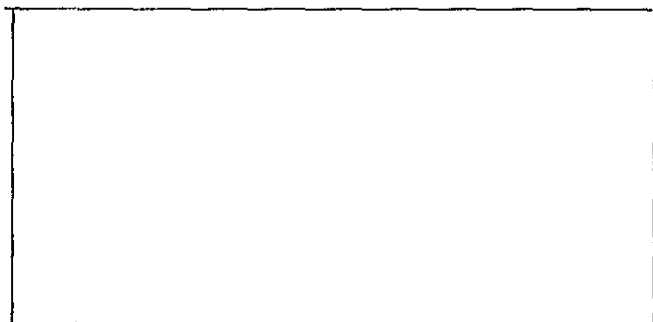
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments PLAZA, SLAB FOUNDATION.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:06

INTERVIEWER DA/DC

1. Address of structure 0002 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

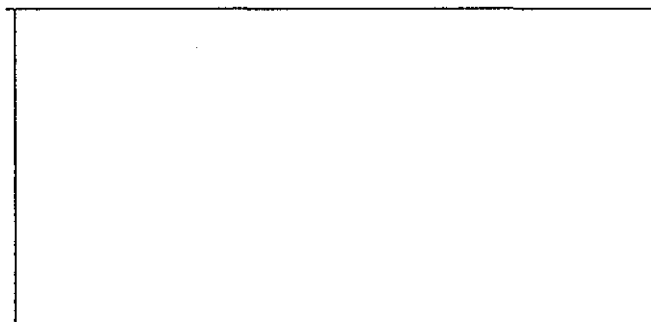
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:04 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:42 INTERVIEWER DA/DC

1. Address of structure 0014 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments DIRT BASEMENT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:20 INTERVIEWER DA/DC

1. Address of structure 0017 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

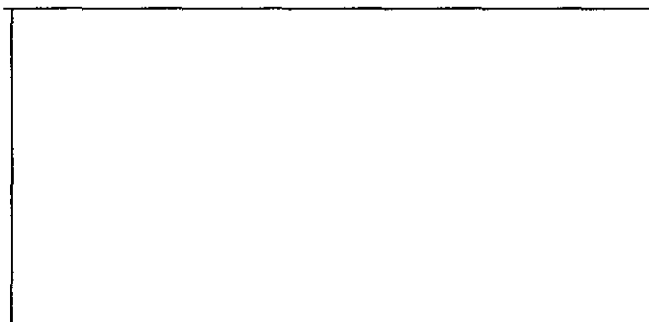
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:45 INTERVIEWER DA/DC

1. Address of structure 0018 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 1.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- (X) Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

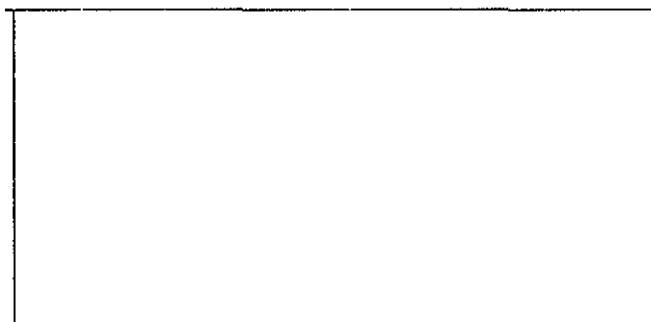
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- (X) () Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- (X) Unknown



Front of House

8. Comments BRICK FLOOR.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:16 INTERVIEWER DA/DC

1. Address of structure 0019 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 4' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

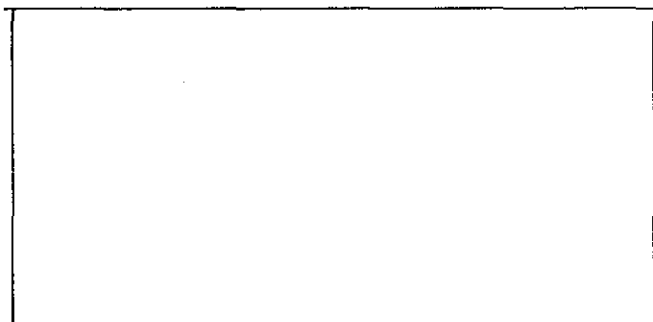
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments GRAVEL BASEMENT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:13 INTERVIEWER DA/DC

1. Address of structure 0021 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 3.5' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

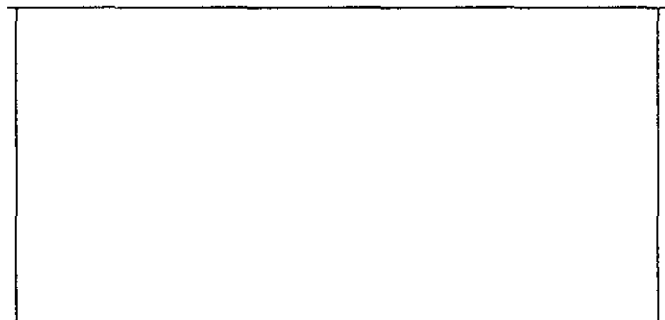
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments TWO SEWER PIPES.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:31 INTERVIEWER DA/DC

1. Address of structure 0022 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately 2' .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

7. Outside House

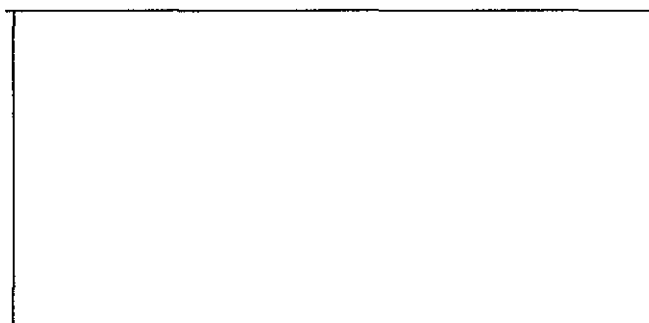
Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown

8. Comments



Front of House

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:31 INTERVIEWER DA/DC

1. Address of structure 0023 WATER STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

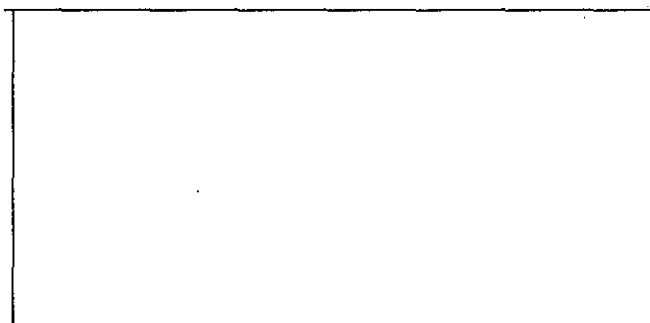
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments STAIRS ARE BROKEN, CAN'T GET TO BASEMENT PER OWNER.
NEIGHBOR TOLD US THEY HAD TROUBLE WITH THEIR SEWER PIPE LEAKING IN THE PAST, BUT OWNER SAID THEY HAD IT FIXED.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/28/95 TIME COMPLETED 3:37 INTERVIEWER DA/DC

1. Address of structure 0033 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO (X)

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|--------------------|-----|---------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

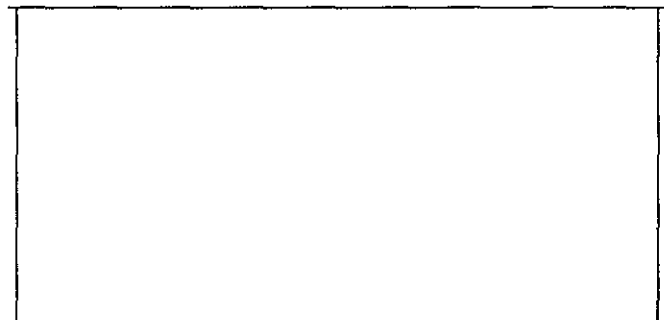
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments DIRT BASEMENT, POOL IN BACKYARD.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:51 INTERVIEWER DA/DC

1. Address of structure 0035 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

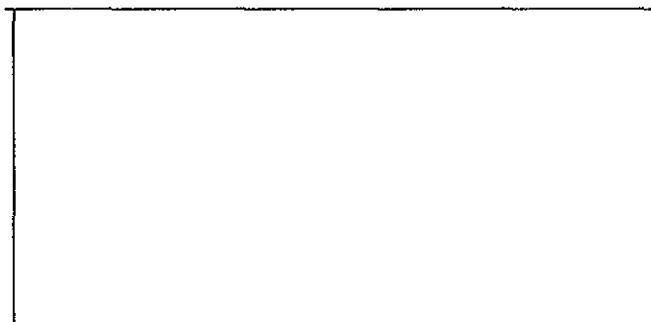
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:24 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:56 INTERVIEWER DA/DC

1. Address of structure 0037 WATER STREET
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- (X) Above the floor level approximately ON .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES (X) NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer (X) Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|---------------------|-----|----------------|
| () | (X) Open Cleanout | () | (X) Open Pipe |
| () | (X) Basement Drain | () | (X) Sump Pit |

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)

NOTE: sketch which leaders connected.

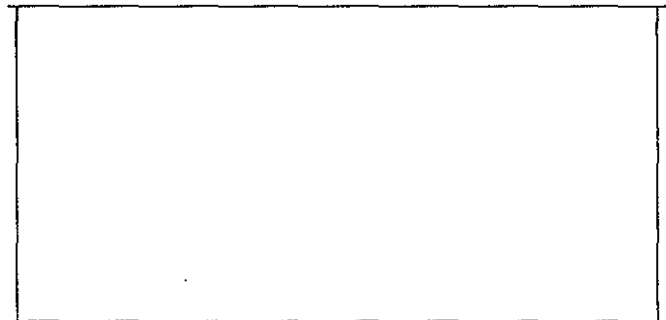
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () (X) Roof leaders into ground
- () (X) Yard drain
- () (X) Window well drain
- () (X) Stair well drain
- () (X) Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 1:58 INTERVIEWER DA/DC

1. Address of structure 0039 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

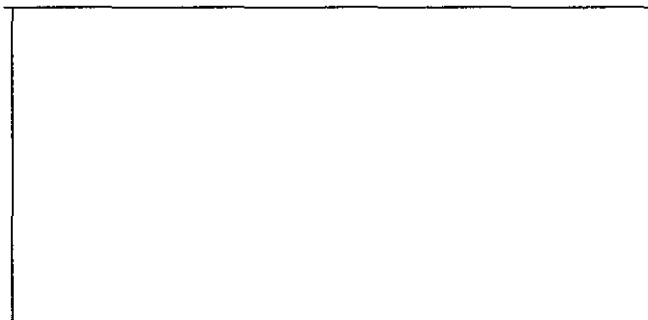
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:27 PM, YELLOW HOSE EXITING LEFT SIDE OF FOUNDATION.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:05 INTERVIEWER DA/DC

1. Address of structure 0047 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

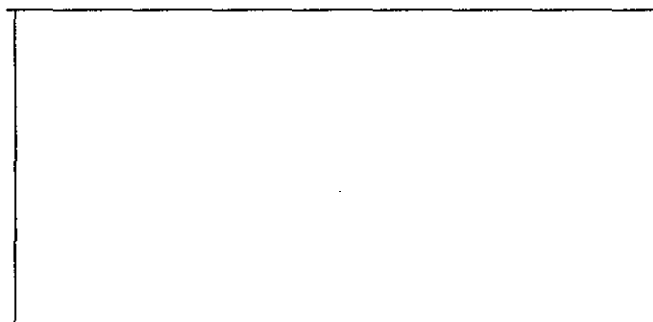
7. Outside House

Stick Sketch of
Positive Finds

- | YES | NO |
|-----|-----|
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
| () | (X) |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

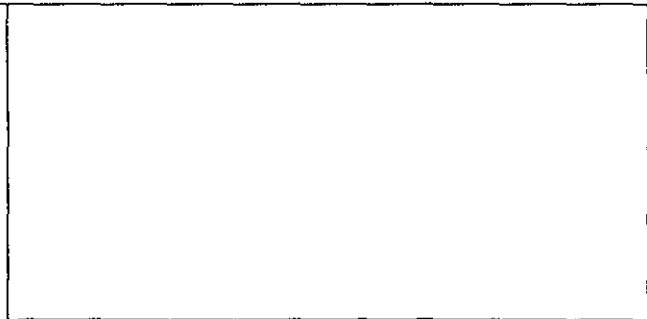
8. Comments SECOND CALL MADE ON 8/28/95 AT 3:30 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:08 INTERVIEWER DA/DC

1. Address of structure 0051 WATER STREET
2. No one home, left card () Not Admitted (X).
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately
() Below floor level at unknown depth.
() Below floor level approx. (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES () NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
() Other
5. Can water enter the sanitary sewer via:
YES NO YES NO
() () Open Cleanout () () Open Pipe
() () Basement Drain () () Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() () Roof leaders into ground
() () Yard drain
() () Window well drain
() () Stair well drain
() () Driveway drain
Points of Discharge
()
() Unknown
Stick Sketch of Positive Finds

Front of House
8. Comments OWNER HAS TO TALK TO HER HUSBAND, COME BACK. SECOND CALL MADE ON 8/28/95 AT 3:33 PM.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:10 INTERVIEWER DA/DC

1. Address of structure 0054 WATER STREET
2. No one home, left card (X) Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- () Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- () Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

Stick Sketch of
Positive Finds

7. Outside House

- | YES | NO |
|-----|-----|
| () | () |
| () | () |
| () | () |
| () | () |
| () | () |
- Roof leaders into ground
- Yard drain
- Window well drain
- Stair well drain
- Driveway drain

Points of Discharge

- ()
- () Unknown

Front of House

8. Comments SECOND CALL MADE ON 8/28/95 AT 3:35 PM, APPEARS VACANT.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:40 INTERVIEWER DA/DC

1. Address of structure 0004 WATER STREET - BEA'S PLACE
2. No one home, left card () Not Admitted ().
3. At what level does the sewer pipe exit the structure?
- () Above the floor level approximately .
- (X) Below floor level at unknown depth.
- () Below floor level approx. (visible from plumbing access pit)
- (X) Can not locate

4. Is there a sump pump in the basement? YES () NO ()

If YES, where is the water discharged?

- () Sanitary Sewer () Dry Well
- () Storm Sewer () Ground Surface
- () Other

5. Can water enter the sanitary sewer via:

- | YES | NO | YES | NO |
|-----|-----|-----|-----|
| () | () | () | () |
| () | () | () | () |
- Open Cleanout Open Pipe
- Basement Drain Sump Pit

6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO ()

NOTE: sketch which leaders connected.

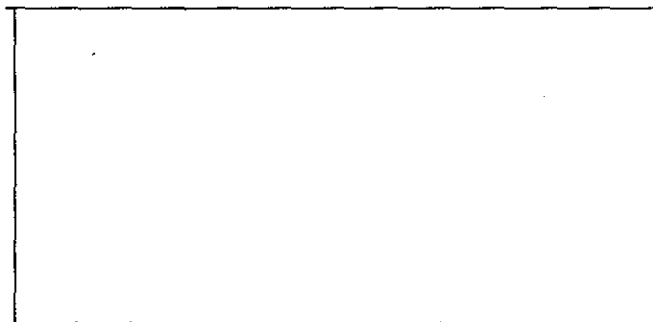
7. Outside House

Stick Sketch of
Positive Finds

- YES NO
- () () Roof leaders into ground
- () () Yard drain
- () () Window well drain
- () () Stair well drain
- () () Driveway drain

Points of Discharge

- ()
- () Unknown



Front of House

8. Comments ACCESS OBSTRUCTED, DOOR TO BASEMENT LOCATED ON FLOOR WITH HEAVY TABLE ON TOP. SEWER PIPE EXITS SECOND FLOOR APARTMENT RIGHT SIDE OF STRUCTURE ON THE OUTSIDE OF THE BUILDING.

DISTRICT

CARD LEFT
TIME

CREW TWO INC.
BUILDING PLUMBING SURVEY
EPPING, NEW HAMPSHIRE

DATE 8/22/95 TIME COMPLETED 2:03 INTERVIEWER DA/DC

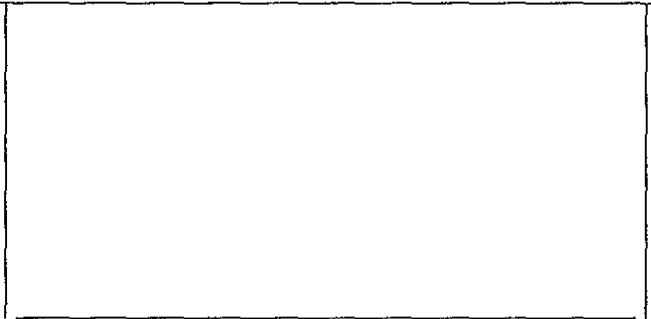
1. Address of structure 0041 WATER STREET - HOGARTH COUNTRY DAY SCHOOL .
2. No one home, left card () Not Admitted () .
3. At what level does the sewer pipe exit the structure?
() Above the floor level approximately .
() Below floor level at unknown depth.
(X) Below floor level approx. 1' (visible from plumbing access pit)
() Can not locate
4. Is there a sump pump in the basement? YES (X) NO ()
If YES, where is the water discharged?
() Sanitary Sewer () Dry Well
() Storm Sewer () Ground Surface
(X) Other OLD SEWER PIPE.
5. Can water enter the sanitary sewer via:
YES NO YES NO
() (X) Open Cleanout (X) () Open Pipe
() (X) Basement Drain () (X) Sump Pit
6. Are roof drainage leaders connected to the sanitary sewer via the structure plumbing? YES () NO (X)
NOTE: sketch which leaders connected.
7. Outside House
YES NO
() (X) Roof leaders into ground
() (X) Yard drain
() (X) Window well drain
() (X) Stair well drain
() (X) Driveway drain
Points of Discharge
()
() Unknown
Stick Sketch of Positive Finds

Front of House
8. Comments DIRT BASEMENT, THREE SUMP PUMPS; TWO NOT CONNECTED, THE OTHER CONNECTED TO OLD SEWER PIPE.

TABLE 1

TABLE 1
EPPING, NH
SUMMARY OF HOUSE SURVEY RESULTS

HOMES SURVEYED	SEWER EXITS STRUCTURE			SUMP PUMP DISCHARGE POINT					GRAVITY STRUCTURE INSIDE HOUSE				OTHER OBSERVATIONS					
	ABOVE FLOOR LEVEL	BELOW FLOOR LEVEL	UNKNOWN	SANITARY SEWER	STORM SEWER	DRY WELL	OUTSIDE GROUND SURFACE	OTHER	OPEN CLEANOUT	BASEMENT DRAIN	OPEN PIPE	SUMP PIT	ROOF LEADERS TO SANITARY	ROOF LEADERS (SUSPECT)	YARD DRAIN (SUSPECT)	WINDOW WELL DRAIN (SUSPECT)	STAIR WELL DRAIN (SUSPECT)	DRIVEWAY DRAIN (SUSPECT)
159	82	26	7	9	0	0	30	6	0	0	2	0	0	7	1	0	0	0

TABLE 2

TABLE 3

TABLE 3
EPPING, NH
HOUSE-TO-HOUSE SURVEY
SUMMARY OF OBSERVED
OPEN PIPES IN BASEMENT

LOCATION

ACRE STREET
WATER STREET-HOGARTH COUNTRY DAY
SCHOOL

TABLE 4

TABLE 4
EPPING, NH
HOUSE-TO-HOUSE SURVEY
SUMMARY OF
SUSPECT ROOF LEADERS

LOCATION

0088 MAIN STREET
0003 PLEASANT STREET
0032 PLEASANT STREET
0045 PLEASANT STREET
0048 PLEASANT STREET
0042 RAILROAD AVENUE
0018 WATER STREET

TABLE 5

TABLE 5
EPPING, NH
HOUSE-TO-HOUSE SURVEY
SUMMARY OF
SUSPECT YARD DRAINS

LOCATIONS

0077 ST. LAURENT STREET

TABLE 6

TABLE 6
EPPING, NH
HOUSE-TO-HOUSE SURVEY
SUMMARY OF OBSERVED SUMP
PUMPS NOT DISCHARGING TO
SANITARY SEWER

0000	ACRE STREET
0004	ACRE STREET
0010	ACRE STREET
0015	ACRE STREET
0037	CHURCH STREET
0041	CHURCH STREET
0059	CHURCH STREET
0056	MAIN STREET
0087	MAIN STREET
0095	MAIN STREET
0110	MAIN STREET
0069	MAIN STREET - FECTEAU STORE
0010	MOORE STREET
0001	PLEASANT STREET
0003	PLEASANT STREET
0007	PLEASANT STREET
0024	PLEASANT STREET
0027	PLEASANT STREET
0032	PLEASANT STREET
0043	PLEASANT STREET
0064	PLEASANT STREET
0022	RAILROAD AVENUE
0038	RAILROAD AVENUE
0042	RAILROAD AVENUE
0098	RAILROAD AVENUE
0134	RAILROAD AVENUE
0041	ST. LAURENT STREET
0045	ST. LAURENT STREET
0060	ST. LAURENT STREET
0072	ST. LAURENT STREET
0085	ST. LAURENT STREET
0088	ST. LAURENT STREET
0017	WATER STREET
0019	WATER STREET
0037	WATER STREET
0041	WATER STREET - HOGARTH COUNTRY DAY SCHOOL

TABLE 7

APPENDIX C

SMOKE TESTING FIELD WORK RECORDS

**EPPING, NH
REPORT OF SEWER SYSTEM
EVALUATION SURVEY FIELD WORK
SMOKE TESTING
AUGUST 1995**

TABLE OF CONTENTS

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
	LIST OF APPENDICES	I
	LIST OF TABLES	II
1	PURPOSE AND SCOPE	1
2	PROCEDURES	2
3	RESULTS	3

LIST OF APPENDICES

<u>APPENDIX</u>	<u>CONTENTS</u>
1	SMOKE TEST PHOTOGRAPHS
2	SMOKE TEST FIELD SKETCHES

LIST OF TABLES

<u>TABLE</u>	<u>CONTENTS</u>
1	SUMMARY OF SMOKE TESTING RESULTS
2	SUMMARY OF SUSPECT INFLOW SOURCES

SECTION 1

PURPOSE AND SCOPE

The purpose of this study was to investigate select areas of the Epping, NH sanitary sewer system for the purpose of identifying areas of possibly excessive inflow. The findings of the smoke testing field work are summarized in this report.

The study area consisted of the Epping, NH sanitary sewer collection system designated as sub-systems A, B, B1, C, D, E.

SECTION 2

PROCEDURES

2-1 SMOKE TESTING

Smoke testing was conducted on all designated line sections with smoke, produced by 3 minute smoke candles, being forced into each manhole using a gasoline powered, high volume blower. Lines were restricted at the upstream and downstream manholes of each test segment to concentrate the smoke within the test segment. Each test segment was typically two manhole reaches in length.

"Suspect" inflow sources were recorded along with confirmed sources which actually smoked. Examples of suspect sources include driveway drains, stairwell drains, window well drains, patio and area drains, and downspouts piped underground or to the foundation.

Results of the **SMOKE TESTING** are presented in Section 3-1 of this report.

SECTION 3

RESULTS

3-1 SMOKE TESTING

Smoke testing was performed on a total of 37,749 LF of sanitary sewer within the study area as follows:

SUMMARY OF SMOKE TESTING

<u>SUB-SYSTEM</u>	<u>LENGTH</u>
A	7,630
B	13,114
B1	562
C	4,501
D	1,490
E	10,452
<hr/>	
TOTAL	37,749

Table 1 presents a summary of positive smoke test findings which includes for each finding, the location, description, effective tributary drainage area, calculated inflow, photo and field sketch reference number, and recommended investigative or rehabilitation technique. Please note the runoff coefficients of 0.3 (grass or soil) and 0.9 (impervious coatings) have already been factored into the "effective drainage area" column. In many cases both coefficients were implemented for each inflow source. An example of this would be a sloped yard draining to the street surface leading to an inflow source such as a catch basin or area drain.

Tributary drainage areas and calculated inflow rates for indirect and suspect sources could not be determined. Inflow rates of each source will be determined during dyed water testing and flooding activities.

Reference photographs taken during smoke testing are included in **Appendix 1** of this report. Field sketches of all findings are included in **Appendix 2** of this report.

TABLE 1

TABLE 1
EPPING, NH.
SUMMARY OF SMOKE TESTING RESULTS
SUB SYSTEM A

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
33	32	298	MAIN ST						
32	31	298	MAIN ST						
31	26	371	MAIN ST	MH# 30 CNL - BROKEN 1.5" IRONPIPE ELBOW SMOKING			1	1	
29	28	100	PROSPECT ST						
28	27	100	PROSPECT ST						
27	26	296	PROSPECT ST						
26	16	221	MAIN ST						
20	19	300	PRESCOTT RD	MH# 20, 19, 18.1 PAVED OVER					
19	18.1	200	PRESCOTT RD						
18.1	18	145	ACADEMY ST						
18	17	300	ACADEMY ST						
17	16	303	ACADEMY ST						
25	24	133	CATE ST						
24	23	266	CATE ST						
23	22	165	CATE ST						
22	21	203	CATE ST						
21	16	251	CATE ST						
16	15	348	MAIN ST						
15	14	194	MAIN ST						
14.3	14.2	50	UNNAMED ST						
14.2	14.1	257	UNNAMED ST						
14.1	14	44	UNNAMED ST						
14	11	209	MAIN ST						
13	12	381	HIGH ST						
12	11	157	HIGH ST						
11	7	148	MAIN ST						
7	6	308	MAIN ST						
6	5	200	MAIN ST TO MILL ST ESMNT						
5	4	365	MAIN ST TO MILL ST ESMNT						
4	3	300	MAIN ST TO MILL ST ESMNT						
3	2.1	150	MAIN ST TO MILL ST ESMNT						
2.1	2	112	MAIN ST TO MILL ST ESMNT	MH 2 IS MAIN PUMP STATION					
B1-1	A-1	147	WATER ST						
C-1	A-1	140	WATER ST						
A-1	2	170	LAMPREY RIVER CROSSING						
TOTAL		7630			TOTAL	0			

EPPING, NH.
SUMMARY OF SMOKE TESTING RESULTS
SUB SYSTEM B

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
60	59	156	RAILROAD AVE						
59	57	512	RAILROAD AVE	MH 58 - CNL					
57	56	142	RAILROAD AVE	MH 57 - PAVED OVER					
56	55	64	RAILROAD AVE						
55	54	128	RAILROAD AVE						
54	53	165	RAILROAD AVE						
53	52	160	RAILROAD AVE						
52	51	291	RAILROAD AVE						
51	49	283	MAIN ST						
50	49	255	MAPLE ST						
49	45	256	MAIN ST						
48	47	297	CHURCH ST EXTENSION						
47	45	252	CHURCH ST EXTENSION						
46	45	252	CHURCH ST						
45	43	365	MAIN ST						
44	43	351	MOORE ST						
43	42	221	MAIN ST						
42	23	222	MAIN ST						
39	38	322	RAILROAD AVE						
38	36	67	RAILROAD AVE						
37	36	203	ST. LAURENT ST						
36	35	172	ST. LAURENT ST						
35	34	218	ST. LAURENT ST						
34	33	50	ST. LAURENT ST						
33	32	60	ST. LAURENT ST	MH 33 CNL					
32	31	251	ST. LAURENT ST						
31	30	268	ST. LAURENT ST						
30	29	259	ST. LAURENT ST						
29	29	80	ST. LAURENT ST						
29	28	275	ST. LAURENT ST						
28	27	314	ST. LAURENT ST						
41	40	294	CHURCH ST						
40	27	205	CHURCH ST						
27	23	1051	ST. LAURENT ST	MH'S 26, 25, 24, - PAVED OVER					
23	22	139	MAIN ST						
22	22	201	MAIN ST						
22	19	409	BUNKER AVE	MH'S 21, 20 - CNL					
19	2	126	BUNKER AVE						
17	17	155	WHISPERING PINES APARTMENTS						
17	16	242	PLEASANT ST						
16	15	244	PLEASANT ST						
15	14	15	PLEASANT ST						
18	14	270	PLEASANT ST	MH 18 - CNL					
14	12	524	PLEASANT ST	MH 13 - CNL					
12	11	201	PLEASANT ST						
11	10	198	PLEASANT ST						
10	6	653	PLEASANT ST	MH'S 9, 8, 7 - CNL					
6	5	85	PLEASANT ST						
5	4	331	PLEASANT ST						
4	3	293	MAIN ST						
3	2	206	WATER ST						
2	81-1	361	WATER ST	MH 1, SUB SYSTEM B - CNL					
TOTAL		13114			TOTAL	0			

TABLE 1
 EPPING, NH.
 SUMMARY OF SMOKE TESTING RESULTS
 SUB SYSTEM B1

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
4	3	304	MOORE ST						
3	2	214	MOORE ST						
2	1	44	MOORE ST						
TOTAL		562			TOTAL	0			

TABLE 1
EPPING, NH.
SUMMARY OF SMOKE TESTING RESULTS
SUB SYSTEM C

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
21	13	748	CALEF HIGHWAY	MH'S 20, 15, 14 - CNL					
19	17	144	MAIN ST						
18	17	90	MAIN ST						
17	15	270	MAIN TO CALEF H'WAY ESMNT	MH'S 16, 15 - CNL					
13	12	231	CALEF HIGHWAY	MH 12 - PAVED OVER					
12	8	335	RAILROAD AVE	MH 11 - CNL					
10	9	254	ACRE ST						
9	8	251	ACRE ST						
8	7	357	RAILROAD AVE	MH 7 - PAVED OVER					
7	5	568	RAILROAD AVE	MH 6 - CNL:4" SVC IN VACANT LOT SMOKING	450	5809	2,3	2	CAP/PLUG OPENING
5	4	357	WATER ST						
4	3	300	WATER ST						
3	2	284	WATER ST						
2	1	312	WATER ST						
TOTAL		4501			TOTAL	5809			

TABLE 1
 EPPING, NH.
 SUMMARY OF SMOKE TESTING RESULTS
 SUB SYSTEM D

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
8	7	80	PIKE ST						
7	6	180	PIKE ST						
6	5	222	PIKE ST						
5	3	300	PIKE ST						
4	3	301	MILL ST						
3	2	137	MILL ST						
2	1	270	MILL ST						
TOTAL		1490			TOTAL	0			

TABLE 1
EPPING, NH.
SUMMARY OF SMOKE TESTING RESULTS
SUB SYSTEM E

FROM M.H.	TO M.H.	SEWER LENGTH (FEET)	LOCATION	FINDINGS	EFFECTIVE DRAINAGE AREA (SQ.FT.)	CALCULATED INFLOW 0.87 IN/HR (G.P.D.)	PHOTO #	SKETCH #	RECOMMENDATION
32	31	257	PLUMER ST						
31	30	218	PLUMER ST						
30	29	257	PLUMER ST						
29	28	339	PLUMER ST						
28	27	296	PLUMER ST						
27	26	180	PLUMER ST						
26	25	199	ELM ST						
25	24	299	ELM ST						
24	23	313	ELM ST						
STUB	23.1	360	HIGHLAND DR						
23.1	T-IN	20	HIGHLAND DR						
23	22	316	ELM ST						
STUB	18.7	198	HIGHLAND DR						
18.7	18.6	259	SHORE DRIVE						
18.6	18.5	210	SHORE DRIVE						
18.5	18.4	198	SHORE DRIVE						
18.4	18.1	277	SHORE DRIVE						
18.3	18.2	282	EDGEWOOD DR. ESMNT						
18.2	18.1	383	EDGEWOOD DR						
18.1	T-IN	235	EDGEWOOD DR/ELM ST ESMNT						
22	18	156	ELM ST						
21	20	342	HIGH ST						
20	19	354	HIGH ST						
19	18	310	HIGH ST						
18	15	376	ELM ST						
17	16	204	ELM COURT						
16	15	304	ELM COURT						
15	14	156	ELM ST						
14	13	361	ELM ST						
13	12	200	CALEF HIGHWAY						
12	10	400	CALEF HIGHWAY						
10	7	40	CALEF HIGHWAY						
9	8	335	CALEF HIGHWAY						
8	7	280	CALEF HIGHWAY						
7	6	33	LAGOON DR						
6	5	248	LAGOON DR						
5	4	252	LAGOON DR						
4.1	4	200	AMBER WAY						
4	3	295	LAGOON DR						
3	2	210	LAGOON DR						
2	1	300	LAGOON DR						
TOTAL		10452							
					TOTAL	0			

MH 11 - CNL

TABLE 2

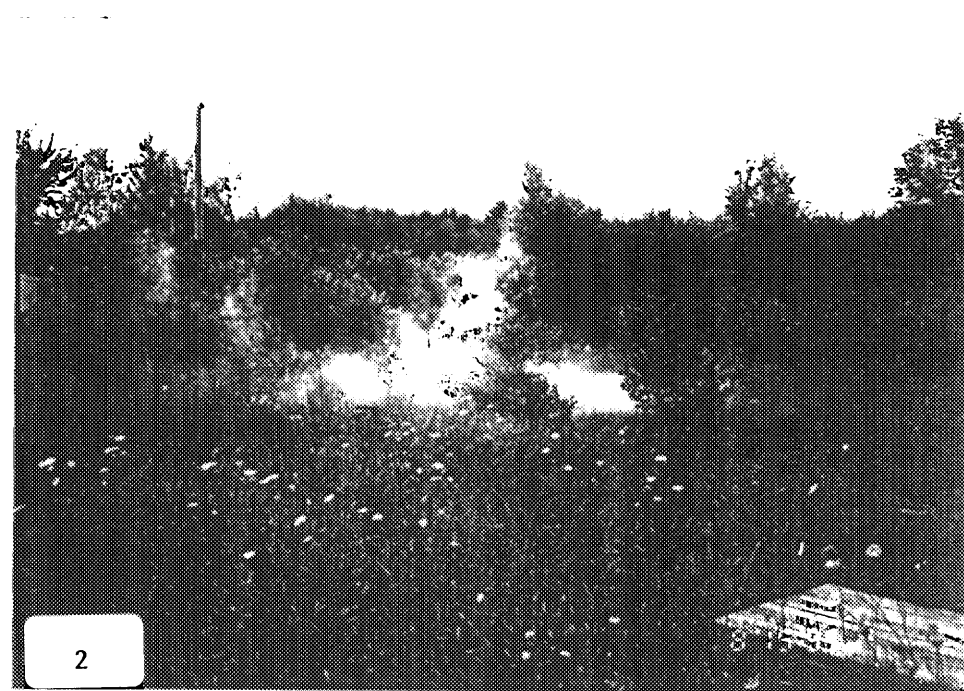
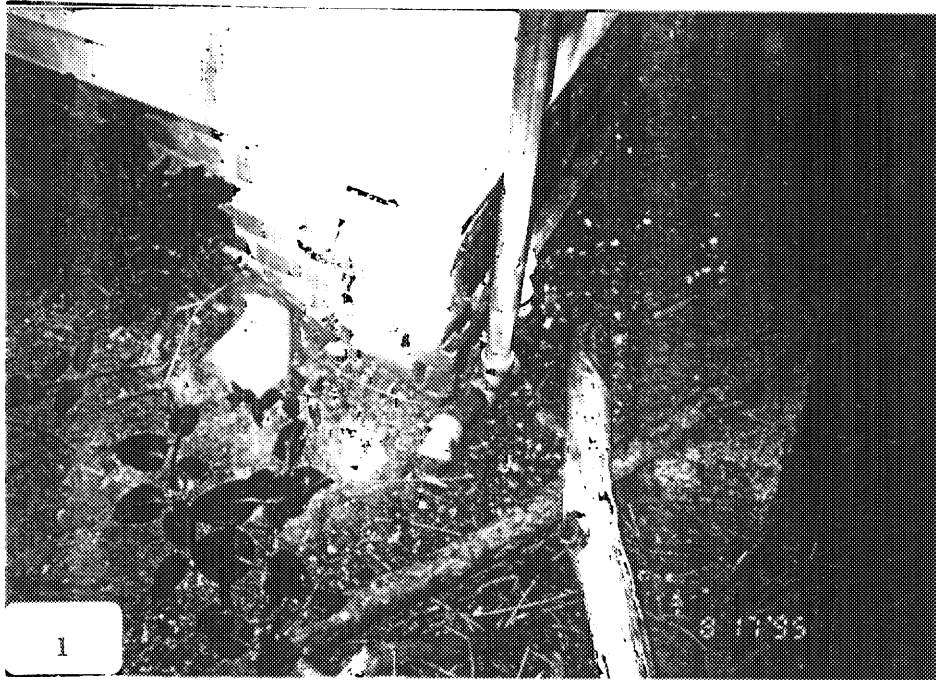
TABLE 2
 EPPING, NH.
 SUMMARY OF
 SUSPECT INFLOW SOURCES
 SUB SYSTEM A

LOCATION	LINE SECTION		SOURCE
	FROM MH	TO MH	
227 MAIN ST	30	26	LEFT REAR ROOF LEADER
172 MAIN ST	7	6	LEFT REAR & LEFT FRONT ROOF LEADER

TABLE 2
 EPPING, NH.
 SUMMARY OF
 SUSPECT INFLOW SOURCES
 SUB SYSTEM 8

LOCATION	LINE SECTION		SOURCE
	FROM MH	TO MH	
32 PLEASANT ST	9	3	LEFT,RIGHT,RIGHT REAR ROOF LEADERS
48 PLEASANT ST	9	3	RIGHT FRONT ROOF LEADER
58 MAIN ST	4	3	RIGHT FRONT ROOF LEADER

APPENDIX 1



14 Priscilla Lane
AUBURN, NH 03032
(603) 625-1212

SHEET NO. 508 SYSTEM A OF SKETCH 1

DATE: 8-17-95

DATA:

SCALE NDT-TO-SCALE



X-4

ROCKINGHAM
GRANGE
#183

229
MAIN ST

227
MAIN ST

MAIN ST

PROSPECT ST

232
MAIN ST

30

82

26

“ ”

UTILITY PIPELINE SERVICES, INC.

14 Priscilla Lane
AUBURN, NH 03032
(603) 625-1212

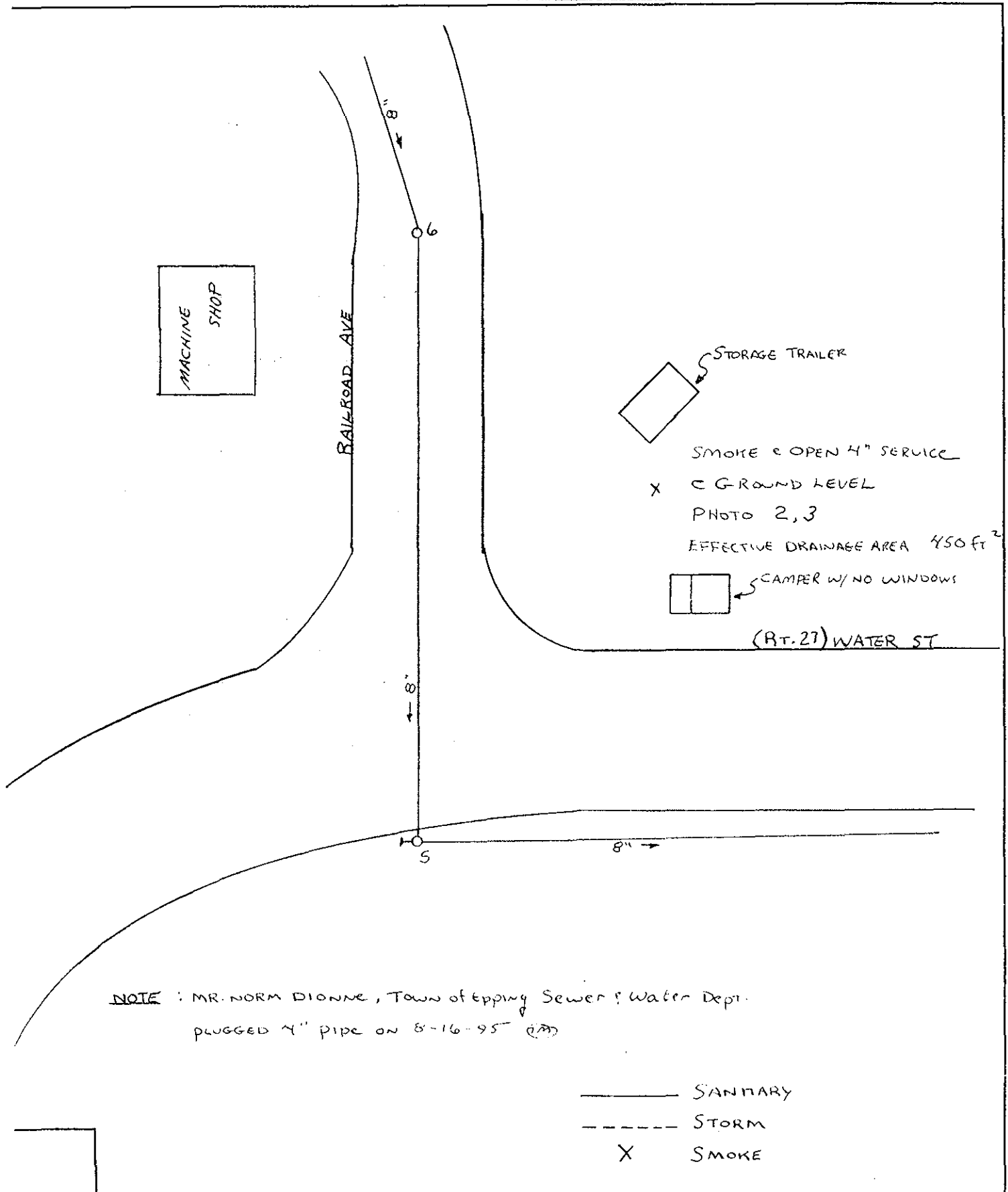
JOB: EPHING, NH SMOKE TEST

SHEET NO SUB SYSTEM C OF SKETCH 2

CALCULATED BY _____ DATE 8-15-95

CHECKED BY _____ DATE _____

SCALE NOT-TO-SCALE



APPENDIX D

DYED WATER TESTING FIELD WORK RECORDS

**EPPING, NH
DYED WATER TESTING
JUNE 1996**



Utility Pipeline Services, Inc.

July 23, 1996

Tel: (603) 625-1212

Fax: (603) 623-6680

Sverdrup Civil, Inc.
2 Center Plaza
Boston, MA 02108-1900

Attention: Paul Savard

RE: Epping, NH
Dyed Water Testing

Dear Mr. Savard:

On June 25, 1996, a crew from Utility Pipeline Services Inc., performed dyed water testing at nine (9) selected sites in Epping, NH.

A nontoxic, water soluble, dye concentrate is introduced at the suspect source. The closest downstream sanitary manhole and area adjacent to the suspect source are monitored for the presence of dye.

The results of the dyed water testing are attached as **Table 1** of this report. Please note that sites were selected based upon data obtained during the smoke testing and house-to-house survey conducted previously.

We thank you for allowing us the opportunity to provide this information. If you should have any questions or need anything additional, please do not hesitate to contact me.

Very truly yours,
UTILITY PIPELINE SERVICES, INC.

A handwritten signature in cursive script that reads "Thomas A. Mitchell".

Thomas Mitchell
Project Manager

TM/dak

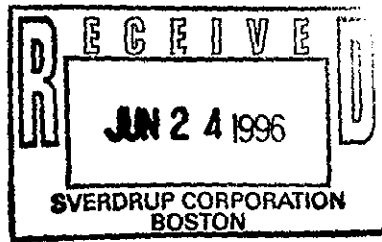
TABLE 1

**TABLE 1
EPPING, NH
DYED WATER TESTING**

SUB SYSTEM	TEST #	LOCATION	SUSPECT SOURCE	RESULTS
A	1	227 MAIN STREET	LR, RL	DRAINS TO REAR IN YARD
A	2	172 MAIN STREET	LR, RL	DISCONNECTED (NOT CEMENTED)
A	2	172 MAIN STREET	LF, RL	DRAINS TO YARD
B	3	32 PLEASANT STREET	LR, RR, RL	DRAINS TO REAR IN YARD
B	4	48 PLEASANT STREET	RF, RL	DRAINS INTO YARD
B	5	58 MAIN STREET	RF, RL	CANNOT LOCATE (#58)
B	6	88 MAIN STREET	RL	DRAINS OUT BACK UNDER PORCH IN BACK YARD
B	7	3 PLEASANT STREET	RL	CANNOT LOCATE (#3)
B	8	45 PLEASANT STREET	RL	DRAINS TO REAR IN YARD
B	9	42 PLEASANT STREET	RL	DRAINS INTO CATCH BASIN
B	10	18 WATER STREET	RL	NEGATIVE (NOT TO SEWER)
B	11	77 ST. LAURENT STREET	YARD DRAIN	NEGATIVE (DRAINS TO BROOK)

**RL = ROOF LEADER, RR = RIGHT REAR, RF = RIGHT FRONT, LR = LEFT REAR,
LF = LEFT FRONT**

APPENDIX E
MANHOLE INSPECTION FIELD REPORTS



EPPING, NH
MANHOLE INSPECTION REPORT
MAY 1996



Utility Pipeline Services, Inc.

June 21, 1996

Tel: (603) 625-1212
Fax: (603) 623-6680

Sverdrup Civil, Inc.
2 Center Plaza
Boston, MA 02108-1900

Attention: Paul Savard

RE: Epping, NH
Report of Manhole Inspection

Dear Mr. Savard:

This letter is written to document and summarize the Manhole Inspection Program recently completed by our crews on the above referenced project.

A summary of observations made within the manholes during the inspection is presented in **Table 1** of this report. A summary of line observations found during the line lamping procedure of the inspection is presented in **Table 2** of this report. The printed inspection logs are included in **Appendix 1** of this report.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,
UTILITY PIPELINE SERVICES, INC.

A handwritten signature in cursive script that reads "Robert J. Kerry". To the right of the signature is a small, stylized monogram or initials "dak".

Robert J. Kerry
Project Manager

RJK/dak

TABLE 1

Table 1
EPPING, N.H.
Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Observation	Manhole Components			
					Area	Steps			Corbel	Walls	Floor	Invert
2	MILL ST. NEAR PUMP STATION	AT	2 1 -- --	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
* IN FROM MH# 2 IN SUB SYSTEM "D"												
3	EASEMENT	ABOVE 8	2 1 -- --	Pick Hole(s) Lift Hole(s)	1.2	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
4	MAIN STREET/MILL SREET EASEMENT	ABOVE 3	2 1 -- --	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
5	MAIN ST. RIVER EASEMENT/BEHIND BARBER SHOP	AT	2 1 -- --	Pick Hole(s) Lift Hole(s)	120.0	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	PRECAST GOOD	PRECAST FAIR 180 A FEW DRIPPING SEAMS IN MIDDLE OF WALL	BRICK GOOD	BRICK GOOD
6	170 MAIN STREET	AT	2 1 -- --	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR & DETERIORATING BRICK	PRECAST GOOD	BRICK GOOD	BRICK GOOD

Summary of Observations Made During Manhole Inspection

		General Observations							Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage Area	Steps	Surcharge	Observation	Manhole Components				
									Corbel	Walls	Floor	Invert	
22	134 MAIN STREET	AT	--	--	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			--	--	Lift Hole(s)								
					COVER CRACKED								
23	117 MAIN STREET	AT	2	1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			--	--	Lift Hole(s)								
24	ST. LAURENT STREET	AT	--	--	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
			--	--	Lift Hole(s)								
BURIED MANHOLE, CANNOT INSPECT													
25	ST. LAURENT STREET	AT	--	--	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
			--	--	Lift Hole(s)								
BURIED MANHOLE, CANNOT INSPECT													
26	ST. LAURENT STREET	AT	--	--	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
			--	--	Lift Hole(s)								
BURIED MANHOLE CANNOT INSPECT													

Summary of Observations
Made During Manhole Inspection

		General Observations						Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Manhole Components				
					Area	Steps		Observation	Corbel	Walls	Floor	Invert
27	ST. LAURENT STREET	AT	2	1	8.1	NONE	No Current Surcharge Evident	MATERIAL	BRICK	PRECAST	BRICK	BRICK
			--	--				CONDITION	FAIR	GOOD	FAIR	FAIR
			--	--				LEAKS (gpd)				
								DEFECTS	MISSING MORTAR			

Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Observation	Manhole Components			
					Area	Steps			Corbel	Walls	Floor	Invert
5	RAILROAD AVENUE @ WATER AVENUE	BELOW -2.5	2 1 -- --	Pick Hole(s) Lift Hole(s)	54.0	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	PRECAST FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK FAIR
6	RAILROAD AVENUE	AT	-- -- -- --	Pick Hole(s) Lift Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
BURIED MANHOLE; CANNOT INSPECT												
7	RAILROAD AVENUE	AT	-- -- -- --	Pick Hole(s) Lift Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
BURIED MANHOLE, CANNOT INSPECT												
8	35 RAILROAD AVENUE	BELOW -1	2 1 -- --	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR	PRECAST GOOD	BRICK GOOD	BRICK GOOD

Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations					
Manhole Number	Location	Grade	Cover Description		Drainage Area	Steps	Surcharge	Observation	Manhole Components				
									Corbel	Walls	Floor	Invert	
1	20 MILL STREET (NEAR)	AT	--	--	Pick Hole(s) Lift Hole(s)	162.0	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
DOWNSTREAM MANHOLE IN SUB SYSTEM "A"													
2	25 MILL STREET	AT	2	1	Pick Hole(s) Lift Hole(s)	216.0	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
3	MILL STREET AT PIKE STREET	AT	2	1	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
4	46 MILL STREET	AT	2	1	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
DEAD END MANHOLE													
5	12 PIKE STREET	AT	2	1	Pick Hole(s) Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD

Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations					
Manhole Number	Location	Grade	Cover Description		Drainage Area	Steps	Surcharge	Observation	Manhole Components				
									Corbel	Walls	Floor	Invert	
6	20 PIKE STREET	AT	2	1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	PRECAST GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			--	--	Lift Hole(s)								
					CRACKED COVER								
7	25 PIKE STREET	AT	2	1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			--	--	Lift Hole(s)								
8	31 PIKE STREET	AT	2	1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			--	--	Lift Hole(s)					MISSING MORTAR			
DEAD END MANHOLE													

Summary of Observations
Made During Manhole Inspection

Manhole Number	Location	General Observations						Manhole Structural Condition and Observations				
		Grade	Cover Description		Drainage Area	Steps	Surcharge	Observation	Corbel	Walls	Floor	Invert
3	LAGOON ROAD NEAR TREATMENT PLANT GATE	AT	2 1	Pick Hole(s)	2.7	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
4	LAGOON ROAD AT AMBEL WAY	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			-- --	Lift Hole(s)								
				CRACKED COVER								
5	1 LAGOON ROAD	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
			-- --	Lift Hole(s)								
6	LAGOON STREET	AT	-- --	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS				
			-- --	Lift Hole(s)								
	BURIED MANHOLE; CANNOT INSPECT											
10	ROUTE 125 AT LAGOON STREET ON SHOULDER	BELOW -0.25	2 1	Pick Hole(s)	2.7	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK FAIR LIGHT MINERAL DEPOSITS
			-- --	Lift Hole(s)								

Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description	Drainage Area	Steps	Surcharge	Observation	Manhole Components				
								Corbel	Walls	Floor	Invert	
11	ROUTE 125	AT	-- -- Pick Hole(s) -- -- Lift Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS					
BURIED MANHOLE; CANNOT INSPECT												
12	ROUTE 125	AT	-- -- Pick Hole(s) -- -- Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD	
13	ELM STREET @ GETTY STATION PARKING LOT	AT	2 1 Pick Hole(s) -- -- Lift Hole(s)	57.6	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD	
OUTGOING PIPE CONNECTION LEAK FROM 6-10:00 POSITIONS, 1.5 GPM												
14	17 ELM STREET	AT	2 1 Pick Hole(s) -- -- Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR DETERIORATING BRICKS, MISSING MORTAR	PRECAST FAIR MISSING MORTAR	BRICK GOOD	BRICK GOOD	
15	ELM STREET AT ELM COURT	AT	2 1 Pick Hole(s) -- -- Lift Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD	

Table 1
EPPING, N.H.
Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Observation	Manhole Components			
					Area	Steps			Corbel	Walls	Floor	Invert
16	ELM COURT	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR, MISSING BRICKS	PRECAST GOOD	BRICK GOOD	BRICK GOOD
17	ELM COURT	AT	2 1	Pick Hole(s)	8.1	GOOD	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
DEAD END MANHOLE												
18	ELM STREET AT HIGH STREET	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR MISSING BRICKS,MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
19	9 HIGH STREET	AT	2 1	Pick Hole(s)	8.1		No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
20	42 HIGH STREET	AT	2 1	Pick Hole(s)			No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK GOOD	PRECAST GOOD	BRICK GOOD	BRICK GOOD

Summary of Observations
Made During Manhole Inspection

General Observations								Manhole Structural Condition and Observations				
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Observation	Manhole Components			
					Area	Steps			Corbel	Walls	Floor	Invert
21	HIGH STREET AND PIKE STREET	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
DEAD END MANHOLE												
22	47 ELM STREET	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK POOR MISSING MORTAR	PRECAST GOOD	BRICK GOOD	BRICK GOOD
14.1	ELM STREET BTWN AM LEGION AND GETTY STATION	AT	2 1	Pick Hole(s)	8.1	NONE	No Current Surcharge Evident	MATERIAL CONDITION LEAKS (gpd) DEFECTS	BRICK FAIR MISSING MORTAR	PRECAST GOOD	BRICK GOOD 1" DIRT AND RUBBLE	BRICK GOOD

Summary of Observations
Made During Manhole Inspection

		General Observations						Manhole Structural Condition and Observations					
Manhole Number	Location	Grade	Cover Description		Drainage		Surcharge	Observation	Manhole Components				
					Area	Steps			Corbel	Walls	Floor	Invert	
2	UPSTREAM TREATMENT PLANT	AT	2	1	Pick Hole(s)	2.7	NONE	No Current Surcharge Evident	MATERIAL	BRICK	PRECAST	BRICK	BRICK
			--	--	Lift Hole(s)				CONDITION	FAIR	GOOD	GOOD	GOOD
								LEAKS (gpd)					
									DEFECTS	MISSING MORTAR			

TABLE 2

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
2	IN FROM 3	13' 1"	8	ACP	13	G	3.5	0	0	
	IN FROM 2*	4' 11"	8	ACP	13	G	.25	0	0	
	OUT TO 1	13' 2"	8	ACP	13	G	3.75	0	0	
3	IN FROM 4	13' 4"	8	ACP	13	G	3.5	0	0	
	OUT TO 2	13' 5"	8	ACP	13	G	3.5	0	0	
4	IN FROM 5	9' 9"	8	ACP	13	G	3.5	0	0	MINERAL DEPOSITS
	OUT TO 3	9' 10"	8	ACP	13	G	3.5	0	0	
5	IN FROM 6	6' 4"	8	ACP	13	G	1.0	0	2160	12 O'CLOCK
	OUT TO 4	6' 5"	8	ACP	13	G	1.0	0	0	
6	IN FROM 7	6' 4"	8	ACP	13	G	1.0	0	0	
	OUT TO 5	6' 5"	8	ACP	13	G	1.0	0	0	

Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
2	IN FROM 3	7' 3"	8	ACP	13	G	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
	IN FROM 19	7' 3"	8	ACP	13	G	1.0	0	0	
	OUT TO 1	7' 4"	8	ACP	13	G	2.0	0	0	
3	IN FROM 4	9' 9"	8	ACP	13	G	0	0	0	
	IN FROM 5	8' 2'	8	ACP	13	G	1.0	0	0	
	OUT TO 2	9' 10"	8	ACP	13	G	1.0	0	0	
19	IN FROM 21	5' 6"	8	ACP	13	G	1.5	0	0	
	OUT TO 2	5' 7"	8	ACP	13	G	1.5	0	0	
22	IN FROM 23	8' 9"	8	ACP	13	G	3	0	0	
	IN FROM 22.1	8' 9"	8	ACP	13	G	0	0	0	
	OUT TO 21	8' 10"	8	ACP	13	G	3	0	0	
23	IN FROM 24	7' 4"	8	ACP	13	G	2.0	0	0	
	IN FROM 42	7' 4"	8	ACP	13	G	1.0	2.0	0	
	OUT TO 22	7' 5"	8	ACP	13	G	3.0	0	0	
27	IN FROM 28	5' 11"	8	ACP	13	G	.50	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
	IN FROM 40	5' 11"	8	ACP	13	G	0	0	0	
	OUT TO 26	6' 0"	8	ACP	13	G	.50	0	0	

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
5	IN FROM 6	7' 6"	8	ACP	13	G	1.0	0	0	
	OUT TO 4	7' 7"	8	ACP	13	G	1.0	0	720	
8	IN FROM 9	5' 2"	8	ACP	13	G	.25	0	0	
	IN FROM 11	5' 3"	8	ACP	13	G	2.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
	OUT TO 7	5' 4"	8	ACP	13	G	2.25	0	0	MINERAL DEPOSITS AT PIPE CONNECTION

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
1	IN FROM 2	5' 2"	8	ACP	13	G	.25	0	0	
	OUT TO 2 (SS - A)	5' 3"	8	ACP	13	G	.25	0	0	
2	IN FROM 3	5' 9"	8	ACP	13	G	.25	0	0	
	OUT TO 1	5' 10"	8	ACP	13	G	.25	0	0	
3	IN FROM 4	5' 6"	8	ACP	13	G	.25	0	0	
	IN FROM 5	5' 4"	8	ACP	13	G	0	0	0	
	OUT TO 2	5' 7"	8	ACP	13	G	.25	0	0	
4	OUT TO 3	6' 2"	8	ACP	13	G	0	0	0	
5	IN FROM 6	8' 10"	8	ACP	13	G	0	0	0	
	OUT TO 3	8' 11"	8	ACP	13	G	0	0	0	
6	IN FROM 7	6' 5"	8	ACP	13	G	0	0	0	
	OUT TO 5	6' 6"	8	ACP	13	G	0	0	0	
7	IN FROM 8	5' 7"	8	ACP	13	G	0	0	0	
	OUT TO 6	5' 8"	8	ACP	13	G	0	0	0	
8	OUT TO 7	5' 6"	8	ACP	13	G	0	0	0	

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
20	IN FROM 21	7' 3"	8	ACP	13	G	.125	0	0	
	OUT TO 19	7' 4"	8	ACP	13	G	.125	0	0	
21	OUT TO 20	4' 8"	8	ACP	13	G	0	0	0	
22	IN FROM 23	5' 4"	8	ACP	13	G	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTOR
	OUT TO 18	5' 5"	8	ACP	13	G	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTOR
14.1	IN FROM 14	8' 4"	12	ACP	13	G	1.0	0	0	
	OUT TO 13	8' 5"	12	ACP	13	G	1.0	0	0	

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
3	IN FROM 4	15' 8"	12	ACP	13	G	6.0	0	0	
	OUT TO 2	15' 9"	12	ACP	13	G	6.0	0	0	
4	IN FROM 5	15' 6"	12	ACP	13	G	5.0	0	720	
	IN FROM WEST	16' 1"	8	ACP	13	G	0	0	0	
	OUT TO 3	15' 7"	12	ACP	13	G	5.0	0	360	
5	IN FROM 6	14' 1"	12	ACP	13	G	5.0	0	1440	
	IN FROM NE	7' 2"	4	PVC	13	G	0	0	0	
	IN FROM SW	6' 1"	4	PVC	13	G	0	0	0	
	OUT TO 4	14' 2"	12	ACP	13	G	5.0	0	0	
10	IN FROM W	8' 8"	6	ACP		G	.125	0	0	
	IN FROM 11	12' 10"	12	ACP		G	1.75	0	0	
	OUT TO 7	12' 11"	12	ACP		G	1.75	0	0	LIGHT MINERAL DEPOSITS AROUND PIPE CONNECTION
12	IN FROM 13	10' 2"	12	ACP	13	G	3.0	0	0	
	OUT TO 11	10' 3"	12	ACP	13	G	3.0	0	2880	
13	IN FROM 14.1	7' 9"	12	ACP	13	G	1.0	1	0	
	OUT TO 12	7' 11"	12	ACP	13	G	1.0	0	2160	
14	IN FROM 15	9' 8"	8	ACP	13	G	1.0	0	0	
	IN FROM SW	6' 9"	8	ACP	13	G	0	0	0	FORCED MAIN, INSIDE DROP
	OUT TO 14.1	7' 0"	12	ACP	13	G	1.0	0	0	
15	IN FROM 16	9' 4"	8	ACP	13	G	0	0	0	
	IN FROM 18	18' 1"	8	ACP	13	G	2.5	0	0	
	OUT TO 14	9' 5"	8	ACP	13	G	2.5	0	0	
16	IN FROM 17	4' 11"	8	ACP	13	G	0	0	0	
	OUT TO 15	5' 0"	8	ACP	13	G	0	0	0	
17	OUT TO 16	4' 6"	8	ACP	13	G	0	0	0	4' SERVICE CONNECTION 9:00
18	IN FROM 19	6' 11"	8	ACP	13	G	.50	0	0	
	IN FROM 22	6' 11"	8	ACP	13	G	2.0	0	0	
	OUT TO 15	7' 0"	8	ACP	13	G	2.5	0	0	
19	IN FROM 20	8' 7"	8	ACP	13	G	.25	0	0	
	OUT TO 18	8' 8"	8	ACP	13	G	.25	0	0	

Table 2
EPPING, N.H.
Summary of Line Observations
During Manhole Inspection

Manhole Number	Line Section	Depth	Pipe Diameter (Inches)	Pipe Material	Joint Length (Feet)	Pipe Type	Observed Flow Depth (Inches)	Observed Debris Depth (Inches)	Pipe Conn Leakage (Gpd)	Observations
2	IN FROM 3	8' 4"	12	ACP	13	G	4.0	0	1440	
	OUT TO 1	8' 5"	12	ACP	13	G	4.0	0	0	

APPENDIX 1

ABBREVIATIONS

Surface Codes	Surface Description
ASP	Asphalt
CONC	Concrete
GRASS	Grass
N.S.	Native Soils (Gravel,Sand,Etc.)

Pipe Code	Pipe Type Description
ABS	Polyethelene Drain Pipe
ACP	Asbestos Cement Pipe
CIP	Brick Pipe
CONC	Cast Iron Pipe
COR	Concrete Pipe
CPP	Corrugated Plastic Pipe
DIP	Ductile Iron Pipe
OB	Orangeberg Pipe
PIP	Poured In Place
PVC	Polyvinyl Chloride Pipe
RCP	Reinforced Concrete Pipe
TR	Truss Pipe
VCP	Vitrified Clay pipe

OBS CODE	OBSERVATION
BISC	Break-In Service Connection
BISCP	Break-In SC - Protruding
BP	Broken Pipe
CC	Circular Crack
CJ	Cracked Joint
CNP	Cannot Proceed
CNPR	Cannot Proceed - Reverse Setup
COOW	Camera Out Of Water
CUW	Camera Under Water
DC	Drop Connection
G	Grease
HOLE	Hole In Pipe
HVY RTS	Heavy Roots
LBISC	Leaking Break-in Service Conn.
LBISCP	Leaking Break-in SC - Protruding
LCB	Longitudinal Crack Begins
LCE	Longitudinal Crack Ends
LJ	Leaking Joint
LSC	Leaking Service Connection

OBS CODE	OBSERVATION
LT. RTS	Light Roots
MC	Multiple Cracks
MD	Mineral Deposits
MH	Center of Manhole
MOD RTS	Moderate Roots
OJ	Open Joints
OSJ	Offset Joint
PC	Pipe Material Changes
PM	Piece Missing
RBISC	Running Break-in Service Connection
RBISCP	Running Break-in SC Protruding
RC	Record Comment
RCF	Record Comment (w/Footage)
RSC	Running Service Connection
SAGB	Sag in Line Begins
SAGE	Sag in Line Ends
SC	Service Connection
TUBR	Tuberculated

Utility Pipeline Services, Inc. Manhole Inspection Log

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: MILL ST. NEAR PUMP STATION		Sub-System: A	
Manhole No.: 2	Map Number: A	Inspector: FB	

275 FT to MH No.: 1 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments: * IN FROM MH# 2 IN SUB SYSTEM "D"
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ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn. Leak (GPD)	Line Comments
IN FROM	2*	4' 11"	8	ACP	13	.25	0	0	
IN FROM	3	13' 1"	8	ACP	13	3.5	0	0	
OUT TO	1	13' 2"	8	ACP	13	3.75	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	EASEMENT		Sub-System:	A	
Manhole No.:	3	Map Number:	A	Inspector:	FB

168 FT to MH No.: 2		Pickhole(s):	2	1	Inch.
Buried: No		Lifthole(s):	0	0	Inch
Grade: ABOVE 8		Surcharge From Invert: NONE EVIDENT			
Drainage Area: (SQFT) 2 X 2 = 1.20		Currently:		Feet	
Runoff Coefficient: 0.3		Marks To:		Feet	
Steps: NONE	Comments:				

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	4	13' 4"	8	ACP	13	3.5	0	0	
OUT TO	2	13' 5"	8	ACP	13	3.5	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96	
Location:	MAIN STREET/MILL SREET EASEMENT		Sub-System:	A
Manhole No.:	4	Map Number:	A	
		Inspector:	FB	

290 FT to MH No.: 3		Pickhole(s): 2 1 Inch.	
Buried: No		Lifthole(s): 0 0 Inch	
Grade: ABOVE 3		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT) 3 X 3 = 8.10		Currently: Feet Marks To: Feet	
Runoff Coefficient: 0.9		Comments:	
Steps: NONE			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Basis Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	5	9' 9"	8	ACP	13	3.5	0	0	MINERAL DEPOSITS
OUT TO	3	9' 10"	8	ACP	13	3.5	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/28/96	
Location:	MAIN ST. RIVER EASEMENT/BEHIND BARBER SHOP		Sub-System:	A	
Manhole No.:	5	Map Number:	A	Inspector:	PB

343 FT to MH No.: 4		Pickhole(s): 2 1 Inch.	
Buried: No		Lifthole(s): 0 0 Inch	
Grade: AT		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT) 20 X 20 = 120.00		Currently: Feet	Marks To: Feet
Runoff Coefficient: 0.3		Comments:	
Steps: NONE			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBE	PRECAST	GOOD		
WALLS	PRECAST	FAIR	0.125	A FEW DRIPPING SEAMS IN MIDDLE OF WALL
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	6	6' 4"	8	ACP	13	1.0	0	2160	12 O'CLOCK
OUT TO	4	6' 5"	8	ACP	13	1.0	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/28/96
Location:	170 MAIN STREET	Sub-System:	A
Manhole No.:	6	Map Number:	A
		Inspector:	PB

242 FT to MH No.: 5		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT
Drainage Area: (SQFT) 3 X 3 = 8.10		Currently: Feet Marks To: Feet
Runoff Coefficient: 0.9		Comments:
Steps: NONE		

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	FAIR		MISSING MORTAR & DETERIORATING BRICK
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rin to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debit Depth (IN)	Pipe Conn Leak (G-P-B)	Line Comments
IN FROM	7	6' 4"	8	ACP	13	1.0	0	0	
OUT TO	5	6' 5"	8	ACP	13	1.0	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	MAIN STREET@ BEA'S RESTAURANT		Sub-System:	B	
Manhole No.:	2	Map Number:	B	Inspector:	FB

207 FT to MH No.: 3		Pickhole(s): 2 1 Inch.	
Buried: No		Lifthole(s): 0 0 Inch	
Grade: AT		Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet	
Drainage Area: (SQFT) 3 X 100 = 270.00 Runoff Coefficient: 0.9 Steps: NONE		Comments:	

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR, MISSING BRICKS
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Comp Leak (GPD)	Line Comments
IN FROM	19	7' 3"	8	ACP	13	1.0	0	0	
IN FROM	3	7' 3"	8	ACP	13	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
OUT TO	1	7' 4"	8	ACP	13	2.0	0	0	

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: MAIN STREET AT PLEASANT STREET		Sub-System: B	
Manhole No.: 3	Map Number: B	Inspector: FB	

207 FT to MH No.: 2 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 15 = 40.50 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	PRECAST	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	4	9' 9"	8	ACP	13	0	0	0	
IN FROM	5	8' 2'	8	ACP	13	1.0	0	0	
OUT TO	2	9' 10"	8	ACP	13	1.0	0	0	

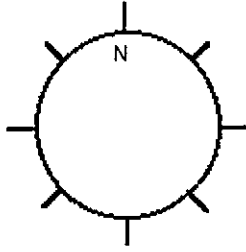
Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: MAIN ST. BEHIND BEA'S RESTAURANT		Sub-System: B	
Manhole No.: 19	Map Number: B	Inspector: FB	

122 FT to MH No.: 2 Buried: No Grade: ABOVE 1 Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 1 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

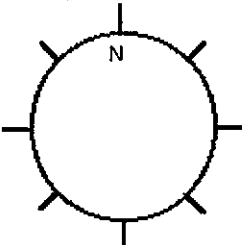
Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conf. Leak (GPD)	Line Comments
IN FROM	21	5' 6"	8	ACP	13	1.5	0	0	
OUT TO	2	5' 7"	8	ACP	13	1.5	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	BUNKER STREET	Sub System:	B
Manhole No.:	20	Map Number:	B
		Inspector:	FB

FT to MH No.:		Pickhole(s):	Inch.
Buried: Yes		Lifthole(s):	Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT)		Currently:	Feet
X =		Marks To:	Feet
Runoff Coefficient:		Comments: BURIED MANHOLE CANNOT INSPECT	
Steps:			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME				
CORBEL				
WALLS				
FLOOR				
INVERT				

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
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Municipality:	EPPING, N.H.				Inspection Date:	5/29/96			
Location:	BUNKER STREET				Sub-System:	B			
Manhole No.:	21		Map Number:	B		Inspector:			
FT to MH No.:					Pickhole(s):			Inch.	
Buried: Yes					Lifthole(s):			Inch	
Grade: AT					Surcharge From Invert: NONE EVIDENT				
Drainage Area: (SQFT)					Currently: Feet Marks To: Feet				
Runoff Coefficient:					Comments:				
Steps:			BURIED MANHOLE COULD NOT INSPECT						
ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS					
FRAME									
CORBEL									
WALLS									
FLOOR									
INVERT									
Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	134 MAIN STREET	Sub-System:	B
Manhole No.:	22	Map Number:	B
		Inspector:	FB

135 FT to MH No.: 23 Buried: Yes Grade: AT Drainage Area: (SQFT) X = Runoff Coefficient: Steps:		Pickhole(s): Inch. Lifthole(s): Inch COVER CRACKED Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn. Leak (GPD)	Line Comments
IN FROM	22.1	8' 9"	8	ACP	13	0	0	0	
IN FROM	23	8' 9"	8	ACP	13	3	0	0	
OUT TO	21	8' 10"	8	ACP	13	3	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96
Location:	20 PIKE STREET		Sub-System:	D
Manhole No.:	6	Map Number:	D	Inspector:
			FB	

223 FT to MH No.: 5		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		CRACKED COVER
Drainage Area: (SQFT) 3 X 3 = 8.10		Surcharge From Invert: NONE EVIDENT
Runoff Coefficient: 0.9		Currently: Feet Marks To: Feet
Steps: NONE	Comments:	

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	PRECAST	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

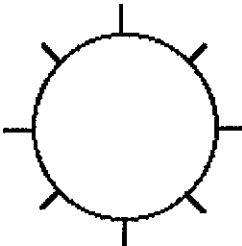
Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Corrosion (GPD)	Line Comments
IN FROM	7	6' 5"	8	ACP	13	0	0	0	
OUT TO	5	6' 6"	8	ACP	13	0	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	117 MAIN STREET		Sub-System:	B	
Manhole No.:	23	Map Number:	B	Inspector:	FB

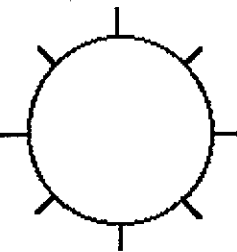
138 FT to MH No.: 22		Pickhole(s):	2	1	Inch.
Buried: No		Lifthole(s):	0	0	Inch
Grade: AT		Surcharge From Invert:			
Drainage Area: (SQFT)		NONE EVIDENT			
3 X 3 = 8.10		Currently:	Feet		
Runoff Coefficient: 0.9	Marks To: Feet				
Steps: NONE	Comments:				

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Barrels Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	24	7' 4"	8	ACP	13	2.0	0	0	
IN FROM	42	7' 4"	8	ACP	13	1.0	2.0	0	
OUT TO	22	7' 5"	8	ACP	13	3.0	0	0	

Municipality:	EPPING, N.H.				Inspection Date:	5/29/96			
Location:	ST. LAURENT STREET				Sub-System:	B			
Manhole No.:	25	Map Number:	B		Inspector:	FB			
FT to MH No.:					Pickhole(s):	Inch.			
Buried: Yes					Lifthole(s):	Inch			
Grade: AT					Surcharge From Invert: NONE EVIDENT				
Drainage Area: (SQFT)					Currently:	Feet			
X =					Marks To:	Feet			
Runoff Coefficient:		Comments:							
Steps:		BURIED MANHOLE, CANNOT INSPECT							
ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS					
FRAME									
CORBEL									
WALLS									
FLOOR									
INVERT									
Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments

Municipality	EPPING, N.H.		Inspection Date	5/29/96
Location	ST. LAURENT STREET		Sub-System	B
Manhole No.	26	Map Number	B	Inspector
			FB	

FT to MH No.:		Pickhole(s):	Inch.
Buried: Yes		Lifthole(s):	Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT)		Currently:	Feet
X =		Marks To:	Feet
Runoff Coefficient:	Comments: BURIED MANHOLE CANNOT INSPECT		
Steps:			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME				
CORBEL				
WALLS				
FLOOR				
INVERT				

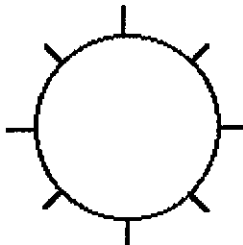
Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
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Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: ST. LAURENT STREET		Sub-System: B	
Manhole No.: 27	Map Number: B	Inspector: FB	

370 FT to MH No.: 26 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	FAIR		
INVERT	BRICK	FAIR		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Cont Leak (GPD)	Line Comments
IN FROM	28	5' 11"	8	ACP	13	.50	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
TO FROM	40	5' 11"	8	ACP	13	0	0	0	
OUT TO	26	6' 0"	8	ACP	13	.50	0	0	

Municipality:	EPPING, N.H.			Inspection Date:	5/29/96				
Location:	RAILROAD AVENUE			Sub-System:	C				
Manhole No.:	6	Map Number:	C	Inspector:					
FT to MH No.:				Pickhole(s):	Inch.				
Buried: Yes				Lifthole(s):	Inch				
Grade: AT				Surcharge From Invert: NONE EVIDENT					
Drainage Area: (SQFT)				Currently: Feet Marks To: Feet					
Runoff Coefficient:				Comments:					
Steps:				BURIED MANHOLE;CANNOT INSPECT					
ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS					
FRAME									
CORBEL									
WALLS									
FLOOR									
INVERT									
Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments

[illegible]

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 35 RAILROAD AVENUE		Sub System: C	
Manhole No.: 8	Map Number: C	Inspector: FB	

358 FT to MH No.: 7 Buried: No Grade: BELOW -1 Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Dobbs Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	11	5' 3"	8	ACP	13	2.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTION
IN FROM	9	5' 2"	8	ACP	13	.25	0	0	
OUT TO	7	5' 4"	8	ACP	13	2.25	0	0	MINERAL DEPOSITS AT PIPE CONNECTION

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 20 MILL STREET (NEAR)		Sub-System: D	
Manhole No.: 1	Map Number: D	Inspector: FB	

80 FT to MH No.: 2-A Buried: No Grade: AT Drainage Area: (SQFT) 3 X 60 = 162.00 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 0 0 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments: DOWNSTREAM MANHOLE IN SUB SYSTEM "A"
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Cont. Leak (GPD)	Line Comments
IN FROM	2	5' 2"	8	ACP	13	.25	0	0	
OUT TO	2 (SS - A)	5' 3"	8	ACP	13	.25	0	0	

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 25 MILL STREET		Sub System: D	
Manhole No.: 2	Map Number: D	Inspector: FB	

268 FT to MH No.: 1 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 80 = 216.00 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Corrosion Leak (GPD)	Line Comments
IN FROM	3	5' 9"	8	ACP	13	.25	0	0	
OUT TO	1	5' 10"	8	ACP	13	.25	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96
Location:	MILL STREET AT PIKE STREET		Sub-System:	D
Manhole No.:	3	Map Number:	D	Inspector:
				FB

137 FT to MH No.: 2		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		
Drainage Area: (SQFT) 3 X 3 = 8.10		Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet
Runoff Coefficient: 0.9		Comments:
Steps: NONE		

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	4	5' 6"	8	ACP	13	.25	0	0	
IN FROM	5	5' 4"	8	ACP	13	0	0	0	
OUT TO	2	5' 7"	8	ACP	13	.25	0	0	

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 46 MILL STREET		Sub-System: D	
Manhole No: 4	Map Number: D	Inspector: FB	

301 FT to MH No.: 3 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments: DEAD END MANHOLE
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
OUT TO	3	6' 2"	8	ACP	13	0	0	0	

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 12 PIKE STREET		Sub System: D	
Manhole No.: 5	Map Number: D	Inspector: FB	

302 FT to MH No.: 3 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rin To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Bottom Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	6	8' 10"	8	ACP	13	0	0	0	
OUT TO	3	8' 11"	8	ACP	13	0	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96
Location:	25 PIKE STREET		Sub-System:	D
Manhole No.:	7	Map Number:	D	Inspector:
			FB	

181 FT to MH No.: 6		Pickhole(s): 2 1 Inch.	
Buried: No		Lifthole(s): 0 0 Inch	
Grade: AT		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT) 3 X 3 = 8.10		Currently: Feet	Marks To: Feet
Runoff Coefficient: 0.9		Comments:	
Steps: NONE			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	8	5' 7"	8	ACP	13	0	0	0	
OUT TO	6	5' 8"	8	ACP	13	0	0	0	

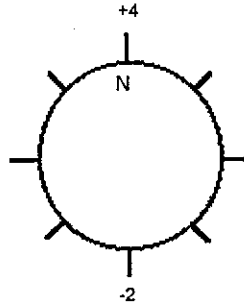
Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: 31 PIKE STREET		Sub-System: D	
Manhole No.: 8	Map Number: D	Inspector: FB	

78 FT to MH No.: 7 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments: DEAD END MANHOLE
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Cond. Leak (GPD)	Line Comments
OUT TO	7	5' 6"	8	ACP	13	0	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	LAGOON ROAD NEAR TREATMENT PLANT GATE	Sub-System:	E
Manhole No.:	3	Map Number:	E
325 FT to MH No.: 2		Pickhole(s):	2 1 Inch.
Buried: No		Lifthole(s):	0 0 Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT	
Drainage Area: (SQFT) 3 X 3 = 2.70		Currently:	Feet
Runoff Coefficient: 0.3		Marks To:	Feet
Steps: NONE		Comments:	



ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Bores Depth (IN)	Pipe Corrosion Leak (GPD)	Line Comments
IN FROM	4	15' 8"	12	ACP	13	6.0	0	0	
OUT TO	2	15' 9"	12	ACP	13	6.0	0	0	

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: LAGOON ROAD AT AMBEL WAY		Sub-System: E	
Manhole No.: 4	Map Number: E	Inspector: FB	

223 FT to MH No.: 3 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch CRACKED COVER Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	FAIR		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

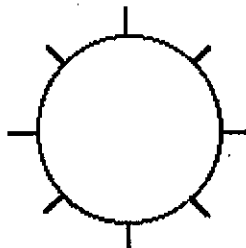
Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Cam Leak (GPD)	Line Comments
IN FROM	5	15' 6"	12	ACP	13	5.0	0	720	
IN FROM	WEST	16' 1"	8	ACP	13	0	0	0	
OUT TO	3	15' 7"	12	ACP	13	5.0	0	360	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	1 LAGOON ROAD		Sub-System:	E	
Manhole No.:	5	Map Number:	E	Inspector:	FB

250 FT to MH No.: 4		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT
Drainage Area: (SQFT) 3 X 3 = 8.10		Currently: Feet Marks To: Feet
Runoff Coefficient: 0.9		Comments:
Steps: NONE		

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn. Leak (GPD)	Line Comments
IN FROM	6	14' 1"	12	ACP	13	5.0	0	1440	
IN FROM	NE	7' 2"	4	PVC	13	0	0	0	
IN FROM	SW	6' 1"	4	PVC	13	0	0	0	
OUT TO	4	14' 2"	12	ACP	13	5.0	0	0	

Municipality:	EPPING, N.H.				Inspection Date:	5/28/96			
Location:	LAGOON STREET				Sub-System:	E			
Manhole No.:	6	Map Number:	E		Inspector:	PB			
FT to MH No.:					Pickhole(s):	Inch.			
Buried: Yes					Lifthole(s):	Inch			
Grade: AT					Surcharge From Invert: NONE EVIDENT				
Drainage Area: (SQFT)					Currently:	Feet			
X =					Marks To:	Feet			
Runoff Coefficient:		Comments:			BURIED MANHOLE; CANNOT INSPECT				
Steps:									
ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS					
FRAME									
CORBEL									
WALLS									
FLOOR									
INVERT									
Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Corp Leak (GPD)	Line Comments

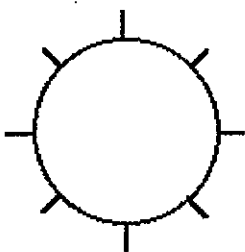
Municipality: EPPING, N.H.		Inspection Date: 5/28/96	
Location: ROUTE 125 AT LAGOON STREET ON SHOULDER		Sub System: E	
Manhole No.: 10	Map Number: E	Inspector: PB	

60 FT to MH No.: 7 Buried: No Grade: BELOW -0.25 Drainage Area: (SQFT) 3 X 3 = 2.70 Runoff Coefficient: 0.3 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surchage From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPI)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	FAIR		LIGHT MINERAL DEPOSITS

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	11	12' 10"	12	ACP		1.75	0	0	
IN FROM	W	8' 8"	6	ACP		.125	0	0	
OUT TO	7	12' 11"	12	ACP		1.75	0	0	LIGHT MINERAL DEPOSITS AROUND PIPE CONNECTION

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96
Location:	ROUTE 125		Sub-System:	E
Manhole No.:	11	Map Number:	E	Inspector:
			PB	

FT to MH No.:		Pickhole(s):	Inch.
Buried: Yes		Lifthole(s):	Inch
Grade: AT		Surcharge From Invert:	
Drainage Area: (SQFT)		NONE EVIDENT	
X =		Currently:	Feet
Runoff Coefficient:		Marks To:	Feet
Steps:		Comments:	
		BURIED MANHOLE; CANNOT INSPECT	

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME				
CORBEL				
WALLS				
FLOOR				
INVERT				

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
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Municipality:	EPPING, N.H.		Inspection Date:	5/28/96	
Location:	ROUTE 125		Sub-System:	E	
Manhole No.:	12	Map Number:	E	Inspector:	PB

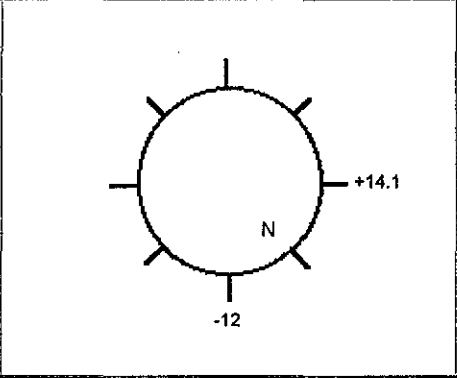
205 FT to MH No.: 11		Pickhole(s):	0	0	Inch.
Buried: No		Lifthole(s):	0	0	Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT			
Drainage Area: (SQFT)		Currently:		Feet	
3 X 3 = 8.10		Marks To:		Feet	
Runoff Coefficient: 0.9		Comments:			
Steps: NONE					

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Corrosion Leak (GPD)	Line Comments
IN FROM	13	10' 2"	12	ACP	13	3.0	0	0	
OUT TO	11	10' 3"	12	ACP	13	3.0	0	2880	

Municipality:	EPPING, N.H.		Inspection Date:	5/28/96
Location:	ELM STREET @ GETTY STATION PARKING LOT		Sub-System:	E
Manhole No.:	13	Map Number:	E	Inspector:
			PB	

212 FT to MH No.: 12
Buried: No
Grade: AT
Drainage Area: (SQFT)
8 X 8 = 57.60
Runoff Coefficient: 0.9
Steps: NONE

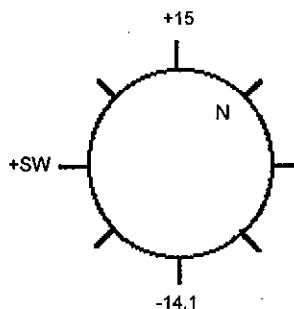


Pickhole(s):	2	1	Inch.
Liftheole(s):	0	0	Inch
Surcharge From Invert:			
NONE EVIDENT			
Currently:			Feet
Marks To:			Feet
Comments:			
OUTGOING PIPE CONNECTION LEAK FROM 6-10:00 POSITIONS, 1.5 GPM			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPM)	Line Comments
IN FROM	14.1	7' 9"	12	ACP	13	1.0	1	0	
OUT TO	12	7' 11"	12	ACP	13	1.0	0	2160	

Municipality:	EPPING, N.H.	Inspection Date:	5/28/96
Location:	17 ELM STREET	Sub-System:	E
Manhole No.:	14	Map Number:	E
367 FT to MH No.: 14.1		Pickhole(s):	2 1 Inch.
Buried: No		Lifthole(s):	0 0 Inch
Grade: AT		Surcharge From Invert:	
Drainage Area: (SQFT)		NONE EVIDENT	
3 X 3 = 8.10		Currently:	Feet
Runoff Coefficient: 0.9		Marks To:	Feet
Steps: NONE		Comments:	



ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		DETERIORATING BRICKS, MISSING MORTAR
WALLS	PRECAST	FAIR		MISSING MORTAR
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Sewer Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	15	9' 8"	8	ACP	13	1.0	0	0	
IN FROM	SW	6' 9"	8	ACP	13	0	0	0	FORCED MAIN, INSIDE DROP
OUT TO	14.1	7' 0"	12	ACP	13	1.0	0	0	

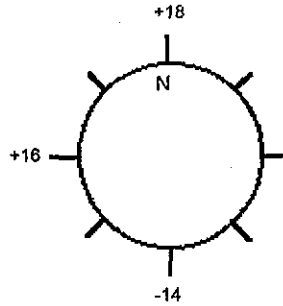
Municipality:	EPPING, N.H.	Inspection Date:	5/28/96
Location:	ELM STREET BTWN AM LEGION AND GETTY STATION	Sub-System:	E
Manhole No.:	14.1	Map Number:	E
Inspector:	PB		

36 FT to MH No.: 13 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
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ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		1" DIRT AND RUBBLE
INVERT	BRICK	GOOD		

Direction	Manhole	Run to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	14	8' 4"	12	ACP	13	1.0	0	0	
OUT TO	13	8' 5"	12	ACP	13	1.0	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	ELM STREET AT ELM COURT	Sub-System:	E
Manhole No.:	15	Map Number:	E
160 FT to MH No.: 14 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:	



ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

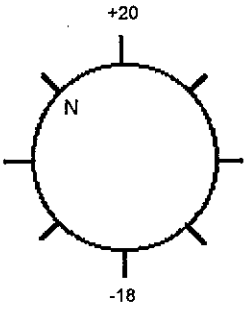
Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	16	9' 4"	8	ACP	13	0	0	0	
IN FROM	18	18' 1"	8	ACP	13	2.5	0	0	
OUT TO	14	9' 5"	8	ACP	13	2.5	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	ELM COURT		Sub-System:	E	
Manhole/No.:	16	Map Number:	E	Inspector:	FB

304 FT to MH No.: 15		Pickhole(s):	2	1	Inch.
Buried: No		Lifthole(s):	0	0	Inch
Grade: AT		Surcharge From Invert:			
Drainage Area: (SQFT)		NONE EVIDENT			
3 X 3 = 8.10		Currently:	Feet		
Runoff Coefficient: 0.9		Marks To:	Feet		
Steps: NONE		Comments:			

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR, MISSING BRICKS
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	17	4' 11"	8	ACP	13	0	0	0	
OUT TO	15	5' 0"	8	ACP	13	0	0	0	

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	9 HIGH STREET	Sub-System:	E
Manhole No.:	19	Map Number:	E
307 FT to MH No.: 18 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps:			
		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch	
		Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet	
		Comments:	

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	20	8' 7"	8	ACP	13	.25	0	0	
OUT TO	18	8' 8"	8	ACP	13	.25	0	0	

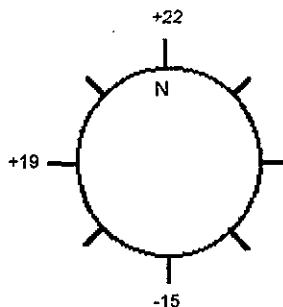
Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: ELM COURT		Sub-System: E	
Manhole No.: 17	Map Number: E	Inspector: FB	

205 FT to MH No.: 16 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: GOOD		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments: DEAD END MANHOLE
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ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
OUT TO	16	4' 6"	8	ACP	13	0	0	0	4' SERVICE CONNECTION 9:00

Municipality:	EPPING, N.H.	Inspection Date:	5/29/96
Location:	ELM STREET AT HIGH STREET	Sub-System:	E
Manhole No.:	18	Map Number:	E
220 FT to MH No.: 15 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 8.10 Runoff Coefficient: 0.9 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:	



ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		MISSING BRICKS,MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	19	6' 11"	8	ACP	13	.50	0	0	
IN FROM	22	6' 11"	8	ACP	13	2.0	0	0	
OUT TO	15	7' 0"	8	ACP	13	2.5	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96
Location:	42 HIGH STREET		Sub-System:	E
Manhole No.:	20	Map Number:	E	Inspector:
			FB	

355 FT to MH No.: 19		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		
Drainage Area: (SQFT)		
X =		
Runoff Coefficient:		Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet
Steps:		Comments:

ITEM	MATERIAL	CONDITION	LEAK (GPD)	DEFECTS
FRAME	CAST	GOOD		
GORBEL	BRICK	GOOD		
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Ditch Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	21	7' 3"	8	ACP	13	.125	0	0	
OUT TO	19	7' 4"	8	ACP	13	.125	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	HIGH STREET AND PIKE STREET		Sub-System:	E	
Manhole No.:	21	Map Number:	E	Inspector:	FB

344 FT to MH No.: 20		Pickhole(s): 2 1 Inch.
Buried: No		Lifthole(s): 0 0 Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT
Drainage Area: (SQFT) 3 X 3 = 8.10		Currently: Feet Marks To: Feet
Runoff Coefficient: 0.9		Comments: DEAD END MANHOLE
Steps: NONE		

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim to Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
OUT TO	20	4' 8"	8	ACP	13	0	0	0	

Municipality:	EPPING, N.H.		Inspection Date:	5/29/96	
Location:	47 ELM STREET		Sub-System:	E	
Manhole No.:	22	Map Number:	E	Inspector:	FB

156 FT to MH No.: 18		Pickhole(s):	2	1	Inch.
Buried: No		Lifthole(s):	0	0	Inch
Grade: AT		Surcharge From Invert: NONE EVIDENT			
Drainage Area: (SQFT)		Currently: Feet Marks To: Feet			
Runoff Coefficient: 0.9		Comments:			
Steps: NONE					

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	POOR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rin To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Debris Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	23	5' 4"	8	ACP	13	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTOR
OUT TO	18	5' 5"	8	ACP	13	1.0	0	0	MINERAL DEPOSITS AT PIPE CONNECTOR

Municipality: EPPING, N.H.		Inspection Date: 5/29/96	
Location: UPSTREAM TREATMENT PLANT		Sub-System: F	
Manhole No.: 2	Map Number: F	Inspector: FB	

290 FT to MH No.: 3 Buried: No Grade: AT Drainage Area: (SQFT) 3 X 3 = 2.70 Runoff Coefficient: 0.3 Steps: NONE		Pickhole(s): 2 1 Inch. Lifthole(s): 0 0 Inch Surcharge From Invert: NONE EVIDENT Currently: Feet Marks To: Feet Comments:
---	--	---

ITEM	MATERIAL	CONDITION	LEAK (GPM)	DEFECTS
FRAME	CAST	GOOD		
CORBEL	BRICK	FAIR		MISSING MORTAR
WALLS	PRECAST	GOOD		
FLOOR	BRICK	GOOD		
INVERT	BRICK	GOOD		

Direction	Manhole	Rim To Invert Depth	Pipe Diameter (IN)	Pipe Material	Joint Length	Flow Depth (IN)	Depth (IN)	Pipe Conn Leak (GPD)	Line Comments
IN FROM	3	8' 4"	12	ACP	13	4.0	0	1440	
OUT TO	1	8' 5"	12	ACP	13	4.0	0	0	

APPENDIX F

CLOSED CIRCUIT TELEVISION FIELD REPORTS

**EPPING, MA
TELEVISION INSPECTION REPORT
MAY 1996**



Utility Pipeline Services, Inc.

Tel: (603) 625-1212
Fax: (603) 623-6680

June 6, 1996

Sverdrup Civil, Inc.
2 Center Plaza
Boston, MA 02108-1900

Attention: Paul Savard

RE: Epping, NH
Report of Television Inspection of Sewer Lines

Dear Mr. Savard:

This letter is written to document and summarize the Television Inspection Program recently completed by our crews on the above referenced project.

Table 1 presents a summary of observations made during the television inspection. The written logs of the television inspection are presented in **Appendix 1** along with an Abbreviation Sheet. Also enclosed are the video tapes which pertain to this inspection. Please note that these are the only copies available.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,
UTILITY PIPELINE SERVICES, INC.

A handwritten signature in black ink, appearing to read "Robert J. Kerry", is written over the typed name.

Robert J. Kerry
Project Manager

RJK/dak

14 Priscilla Lane Auburn, NH 03032

TABLE 1

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: A

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
EASEMENT BETWEEN MAIN& MILL	3	2	8	ACP	13	Asphalt		168.0
					Observed Infil.	Service Flow	Summary of Observations	
					NO DEFECTS OBSERVED			
EASEMENT BETWEEN MAIN& MILL	4	3	8	ACP	13	Asphalt		290.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
EASEMENT BETWEEN MAIN& MILL	5	4	8	ACP	13	Asphalt		343.0
					Observed Infil.	Service Flow	Summary of Observations	
					Sag In Line Begins @8, Sag measuring 3" ends @88			
					Sag In Line Begins @230, Sag measuring 2.5" ends @255			
EASEMENT BETWEEN MAIN& MILL	6	5	8	ACP	13	Asphalt		243.0
					Observed Infil.	Service Flow	Summary of Observations	
					720	Leaking Joint @240		

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection

EPPING N.H.

Sub-System Number: B

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing		Surface Type	Ave. Depth	Total Length
BUNKER AVE.	19	2	8	ACP	13		Asphalt		122.0
					Observed Infil.	Service Flow	Summary of Observations		
					1 Running Service Connection				
					1 Dry Service Connection				
MAIN STREET	2	3	8"	ACP	13'		Asphalt		207.0
					Observed Infil.	Service Flow	Summary of Observations		
					1 Dry Break - In Service Connection				
					Mineral Deposits @2				
					3 Dry Service Connections				
BUNKER AVE.	20	19	8	ACP	13		Asphalt		176.0
					Observed Infil.	Service Flow	Summary of Observations		
					360	Leaking Joint @114			
					Mineral Deposits @96				
					HEAVY MD IN SERVICE @155.1				
					360	1 Running Service Connection			
					4 Dry Service Connections				
BUNKER AVE.	20	21	8	ACP	13		Asphalt		88.0
					Observed Infil.	Service Flow	Summary of Observations		
					1 Dry Service Connection				

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: B

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
BUNKER AVE.	21	22	8	ACP	13	Asphalt		135.0
					Observed Infil.	Service Flow	Summary of Observations	
							2 Dry Service Connections	
							Camera Under Water @36, Camera Out Of Water @108	
MAIN STREET	23	22	8	ACP	13	Asphalt		138.0
					Observed Infil.	Service Flow	Summary of Observations	
					180		2 Dry Break - In Service Connections	
							Leaking Joint @4	
							Mineral Deposits @90	
							2 Dry Service Connections	
							Camera Under Water @50, Camera Out Of Water @60	
							Sag In Line Begins @32, Sag measuring 3" ends @68	
ST. LAURENT ST.	24	23	8	ACP	13	Asphalt		259.0
					Observed Infil.	Service Flow	Summary of Observations	
							Mineral Deposits @2	
							1 Running Service Connection	
							1 Dry Service Connection	
							Sag In Line Begins @150, Sag measuring 2" ends @179	
							Sag In Line Begins @188, Sag measuring 2" ends @195	
							Sag In Line Begins @235, Sag measuring 3.5" ends @257	

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: B

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
ST. LAURENT ST.	25	24	8	ACP	13	Asphalt		237.0
					Observed Infil.	Service Flow	Summary of Observations	
					Mineral Deposits @2			
					1 Dry Service Connection			
					Sag In Line Begins @229, Sag measuring 3" ends @235			
ST. LAURENT ST.	26	25	8	ACP	13	Asphalt		230.0
					Observed Infil.	Service Flow	Summary of Observations	
					Mineral Deposits @2			
					1 Dry Service Connection			
ST. LAURENT ST.	27	26	8	ACP	13	Asphalt		370.0
					Observed Infil.	Service Flow	Summary of Observations	
					Mineral Deposits @367			
					1 Running Service Connection			
					2 Dry Service Connections			

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection

EPPING N.H.

Sub-System Number: C

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
RAILROAD AVE.	6	5	8"	ACP	13	Asphalt		197.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Service Connection			
RAILROAD AVE.	7	6	8"	ACP	13	Asphalt		358.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					MD IN BREAK-IN SERVICE @194.1			
					1440 1 Running Service Connection			
					Sag In Line Begins @290, Sag measuring 2.5" ends @318			
RAILROAD AVE.	8	7	8"	ACP	13	Asphalt		358.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					2880 1 Running Break - In Service Connection			
					MD IN BREAK-IN SERVICE @133.1			
					1 Dry Service Connection			

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: D

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
MILL ST.	2	1	8	ACP	13	Asphalt		268.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					MD IN BREAK-IN SERVICE @35.1			
					360 1 Running Service Connection			
					3 Dry Service Connections			
MILL ST.	3	2	8	ACP	13	Asphalt		137.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Service Connection			
MILL ST.	4	3	8	ACP	13	Asphalt		301.0
					Observed Infil.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					720 3 Running Service Connections			
					3 Dry Service Connections			
PIKE ST.	5	3	8	ACP	13	Asphalt		302.0
					Observed Infil.	Service Flow	Summary of Observations	
					Mineral Deposits @96			
					5 Dry Service Connections			

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: D

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
PIKE ST.	6	5	- 8	ACP	13	Asphalt		223.0
					Observed Infiltration	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					MD IN BREAK-IN SERVICE @151.1			
					2 Dry Service Connections			
PIKE ST.	7	6	8	ACP	13	Asphalt		181.0
					Observed Infiltration	Service Flow	Summary of Observations	
					4 Dry Service Connections			
PIKE ST.	8	7	8	ACP	13	Asphalt		78.0
					Observed Infiltration	Service Flow	Summary of Observations	
					2 Dry Service Connections			
MILL ST.	1	1.1	8	ACP	13	Asphalt		80.0
					Observed Infiltration	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					Sag In Line Begins @72, Sag measuring 2" ends @74			

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection EPPING N.H.

Sub-System Number: E

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
LAGOON ROAD	3	2	12	ACP	13	Asphalt		325.0
					Observed Infil	Service Flow	Summary of Observations	
					1440		Leaking Joint @322	
LAGOON ROAD	4	3	12	ACP	13	Asphalt		223.0
					Observed Infil	Service Flow	Summary of Observations	
					1080		Leaking Joint @2, 221	
LAGOON ROAD	5	4	12	ACP	13	Asphalt		250.0
					Observed Infil	Service Flow	Summary of Observations	
					1440		Leaking Joint @248	
LAGOON ROAD	6	5	12	ACP	13	Asphalt		248.0
					Observed Infil	Service Flow	Summary of Observations	
							360 Break - In SC - Protruding 3" @118	
					187.2		Hole In Pipe @117	
					2160		Leaking Joint @2, 245	
							360 1 Running Service Connection	
LAGOON ROAD	7	6	12	ACP	13	Asphalt		32.0
					Observed Infil	Service Flow	Summary of Observations	
							NO DEFECTS OBSERVED	

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection
EPPING N.H.

Sub-System Number: E

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
LAGOON ROAD	10	7	12	ACP	13	Asphalt		60.0
					Observed Infil.	Service Flow	Summary of Observations	
					NO DEFECTS OBSERVED			
CALEF HIGHWAY	11	10	12	ACP	13	Asphalt		165.0
					Observed Infil.	Service Flow	Summary of Observations	
					3600	Leaking Joint @2		
CALEF HIGHWAY	12	11	12	ACP	13	Asphalt		205.0
					Observed Infil.	Service Flow	Summary of Observations	
					2880	Leaking Joint @2		
CALEF HIGHWAY	13	12	12	ACP	13	Asphalt		212.0
					Observed Infil.	Service Flow	Summary of Observations	
					2160	Leaking Joint @2		
ELM STREET	14.1	13	12	ACP	13	Asphalt		35.0
					Observed Infil.	Service Flow	Summary of Observations	
					NO DEFECTS OBSERVED			

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection

EPPING N.H.

Sub-System Number: E

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
ELM ST.	15	14	8"	ACP	13	Asphalt		160.0
					Observed Infil: 720	Service Flow: 5040	Summary of Observations Leaking Joint @70 1 Running Service Connection Camera Under Water @26, Camera Out Of Water @32 Sag In Line Begins @13, Sag measuring 2" ends @50	
ELM COURT	16	15	8"	ACP	13	Asphalt		304.0
					Observed Infil:	Service Flow:	Summary of Observations 1 Dry Break - In Service Connection MD IN BREAK-IN SERVICE @99.1 4 Dry Service Connections	
ELM COURT	17	16	8"	ACP	13	Asphalt		205.0
					Observed Infil:	Service Flow:	Summary of Observations 1 Dry Break - In Service Connection MD IN BREAK-IN SERVICE @187.1 1 Dry Service Connection	
ELM ST.	22	18	8	ACP	13	Asphalt		156.0
					Observed Infil:	Service Flow: 4320	Summary of Observations 1 Running Service Connection 1 Dry Service Connection	

Utility Pipeline Services, Inc. TVLog System

Table 1

Summary of Observations During T.V. Inspection

EPPING N.H.

Sub-System Number: E

Location	From MH	To MH	Pipe Size	Pipe Type	Joint Spacing	Surface Type	Ave. Depth	Total Length
HIGH ST.	19	18	8"	ACP	13	Asphalt		307.0
					Observed Infiltr.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					Mineral Deposits @207			
					MD IN BREAK-IN SERVICE @181.1			
					3 Dry Service Connections			
					Sag In Line Begins @285, Sag measuring 2" ends @306			
HIGH ST.	20	19	8"	ACP	13	Asphalt		355.0
					Observed Infiltr.	Service Flow	Summary of Observations	
					Hole In Pipe @179			
					MD AT HOLE IN PIPE @179.1			
					7 Dry Service Connections			
HIGH ST.	21	20	8"	ACP	13	Asphalt		344.0
					Observed Infiltr.	Service Flow	Summary of Observations	
					1 Dry Break - In Service Connection			
					Mineral Deposits @18			
					MD IN BREAK-IN SERVICE @301.1			
					1 Running Service Connection			
					7 Dry Service Connections			
ELM STREET	14	14.1	12	ACP	13	Asphalt		367.0
					Observed Infiltr.	Service Flow	Summary of Observations	
					4 Dry Service Connections			

APPENDIX 1

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	EASEMENT BETWEEN MAIN& MILL STREETS					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
A	3	2		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		168.0	

Video Index Start 0:27:43

Video Index Finish 0:32:42

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 3				
167.9	RC	Record Comment				NO DEFECTS OBSERVED
168.0	MH	Center of Manhole 2				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066	Log Date	5/28/96		
Client Name	SVERDRUP CIVIL, INC.			Video Tape No	294
Municipality	EPPING N.H.			Technician	F.B.
Line Location	EASEMENT BETWEEN MAIN& MILL STREETS				
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle	
A	4	3		DOWNSTREAM	
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length
8	ACP	13	ASP		290.0

Video Index Start 0:17:51

Video Index Finish 0:27:03

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 4				
110.0	BISC	Break - In Service Connection	10			CAPPED OFF
290.0	MH	Center of Manhole 3				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	EASEMENT BETWEEN MAIN& MILL STREETS					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
A	5	4		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		343.0	

Video Index Start 0:07:04

Video Index Finish 0:17:50

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 5				
8.0	SAGB	Sag In Line Begins				
88.0	SAGE	Sag measuring 3" ends				
230.0	SAGB	Sag In Line Begins				
255.0	SAGE	Sag measuring 2.5" ends				
343.0	MH	Center of Manhole 4				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	EASEMENT BETWEEN MAIN& MILL STREETS					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
A	6	5		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		243.0	

Video Index Start 0 Video Index Finish 0:07:03

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 6				
240.0	LJ	Leaking Joint	12-1	0.50		PIPE CONNECTION LEAKING
243.0	MH	Center of Manhole 5				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	BUNKER AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	19	2		UPSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		122.0	

Video Index Start 1:07:47

Video Index Finish 1:16:18

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 19				
45.0	SC	Service Connection	3			
52.0	RSC	Running Service Connection	9			IN SERVICE
122.0	MH	Center of Manhole 2				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	1/29/90		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MAIN STREET					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	2	3		UPSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13'	ASP		207.0	

Video Index Start 1:20:56

Video Index Finish 02127ED294

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 2				
2.0	MD	Mineral Deposits				AT PIPE CONNECTION
27.0	SC	Service Connection	3			
50.0	BISC	Break - In Service Connection	3			
59.0	SC	Service Connection	9			
70.0	SC	Service Connection	3			
207.0	MH	Center of Manhole 3				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	BUNKER AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	20	19		UPSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		176.0	

Video Index Start 0:56:40

Video Index Finish 1:07:46

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 20				
55.0	SC	Service Connection	9			
96.0	MD	Mineral Deposits				AT JOINT
114.0	LJ	Leaking Joint	3-4	0.25		MD AT JOINT
126.0	SC	Service Connection	9			
129.0	RSC	Running Service Connection	3		0.25	
133.0	SC	Service Connection	9			
155.0	SC	Service Connection	9			
155.1	RCF	Record Comment (with footage)				HEAVY MD IN SERVICE
176.0	MH	Center of Manhole 19				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	BUNKER AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	20	21		UPSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		88.0	

Video Index Start 0:37:12

Video Index Finish 0:43:19

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 20				
44.0	SC	Service Connection	9			
88.0	MH	Center of Manhole 21				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MAIN STREET					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	23	22		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		138.0	

Video Index Start 0:28:10

Video Index Finish 0:37:06

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 23				
4.0	LJ	Leaking Joint	12	0.13		
12.0	SC	Service Connection	3			
32.0	SAGB	Sag In Line Begins				
42.0	SC	Service Connection	3			
50.0	CUW	Camera Under Water				
60.0	COOW	Camera Out Of Water				
68.0	SAGE	Sag measuring 3" ends				
90.0	MD	Mineral Deposits				
130.0	BISC	Break - In Service Connection	9			
132.0	BISC	Break - In Service Connection	8			
138.0	MH	Center of Manhole 22				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	BUNKER AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	21	22		UPSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		135.0	

Video Index Start 0:43:20

Video Index Finish 0:56:39

Feet	Code	Observation	Clock	I/L Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 21				
16.0	SC	Service Connection	9			
32.0	SC	Service Connection	2			
36.0	CUW	Camera Under Water				
108.0	COOW	Camera Out Of Water				
135.0	MH	Center of Manhole 22				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96	
Client Name	SVERDRUP CIVIL, INC.			Video Tape No.	291
Municipality	EPPING N.H.			Technician	F.B.
Line Location	ST. LAURENT ST.				
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle	
B	24	23		DOWNSTREAM	
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length
8	ACP	13	ASP		259.0

Video Index Start 0:21:25

Video Index Finish 0:28:09

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 24				
2.0	MD	Mineral Deposits				AT OUT GOING PIPE CONNECTION
56.0	SC	Service Connection	9			
125.0	RSC	Running Service Connection	3			IN SERVICE
150.0	SAGB	Sag In Line Begins				
179.0	SAGE	Sag measuring 2" ends				
188.0	SAGB	Sag In Line Begins				
195.0	SAGE	Sag measuring 2" ends				
235.0	SAGB	Sag In Line Begins				
257.0	SAGE	Sag measuring 3.5" ends				
259.0	MH	Center of Manhole 23				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ST. LAURENT ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	25	24		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		237.0	

Video Index Start 0:16:14

Video Index Finish 0:21:24

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 25				
2.0	MD	Mineral Deposits				AT OUT GOING PIPE CONNECTION
37.0	SC	Service Connection	3			
229.0	SAGB	Sag In Line Begins				
235.0	SAGE	Sag measuring 3" ends				
237.0	MH	Center of Manhole 24				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ST. LAURENT ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
B	26	25		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		230.0	

Video Index Start 01056

Video Index Finish 0:16:13

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 26				
2.0	MD	Mineral Deposits				AT OUT GOING PIPE CONNECTION
174.0	SC	Service Connection	3			
230.0	MH	Center of Manhole 25				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ST. LAURENT ST.					
Sub System	From MH	To MH	Measured Flow (GPM)		Camera Viewing Angle	
B	27	26			DOWNSTREAM	
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		370.0	

Video Index Start 0

Video Index Finish 01055

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 27				
64.0	SC	Service Connection	9			
172.0	RSC	Running Service Connection	9			IN SERVICE
313.0	SC	Service Connection	3			
367.0	MD	Mineral Deposits				AT INCOMING PIPE CONNECTION
370.0	MH	Center of Manhole 26				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	RAILROAD AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
C	6	5		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		197.0	

Video Index Start 1:18:00

Video Index Finish END

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 6				
68.0	SC	Service Connection	9			
197.0	MH	Center of Manhole 5				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	RAILROAD AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
C	7	6		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		358.0	

Video Index Start 1:07:16

Video Index Finish 1:17:59

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 7				
29.0	RSC	Running Service Connection	3		1.00	
194.0	BISC	Break - In Service Connection	3			
194.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
290.0	SAGB	Sag In Line Begins				
318.0	SAGE	Sag measuring 2.5" ends				
358.0	MH	Center of Manhole 6				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	RAILROAD AVE.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
C	8	7		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		358.0	

Video Index Start 0:56:19

Video Index Finish 1:07:15

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 8				
4.0	SC	Service Connection	9			
133.0	BISC	Break - In Service Connection	9			
133.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
227.0	RBISC	Running Break - In Service Connection	9		2.00	
358.0	MH	Center of Manhole 7				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MILL ST.					
Sub System	From MH	To MH	Measured Flow (GPM)		Camera Viewing Angle	
D	2	1			DOWNSTREAM	
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		268.0	

Video Index Start 1:56:23

Video Index Finish END291

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 2				
35.0	BISC	Break - In Service Connection	3			
35.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
45.0	SC	Service Connection	9			
95.0	SC	Service Connection	9			
189.0	RSC	Running Service Connection	9	0.25	0.25	
231.0	SC	Service Connection	3			
268.0	MH	Center of Manhole 1				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MILL ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	3	2		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		137.0	

Video Index Start 1:53:02

Video Index Finish 1:56:22

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 3				
81.0	SC	Service Connection	3			
137.0	MH	Center of Manhole 2				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	PIKE ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	5	3		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		302.0	

Video Index Start 1:33:42

Video Index Finish 1:43:48

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 5				
39.0	SC	Service Connection	3			
61.0	SC	Service Connection	9			
85.0	SC	Service Connection	3			
96.0	MD	Mineral Deposits				AT JOINT
111.0	SC	Service Connection	9			
154.0	SC	Service Connection	9			
302.0	MH	Center of Manhole 3				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MILL ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	4	3		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		301.0	

Video Index Start 1:43:49

Video Index Finish 1:53:01

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 4				
4.0	RSC	Running Service Connection	9	0.25	0.25	
49.0	RSC	Running Service Connection	3			IN SERVICE
85.0	SC	Service Connection	9			
88.0	RSC	Running Service Connection	2		0.25	
163.0	SC	Service Connection	3			
171.0	BISC	Break - In Service Connection	9			
257.0	SC	Service Connection	9			
301.0	MH	Center of Manhole 3				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	PIKE ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	6	5		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		223.0	

Video Index Start 1:25:27

Video Index Finish 1:33:41

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 6				
52.0	SC	Service Connection	2			
147.0	SC	Service Connection	9			
151.0	BISC	Break - In Service Connection	9			
151.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
223.0	MH	Center of Manhole 5				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	291
Municipality	EPPING N.H.				Technician	F.B.
Line Location	PIKE ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	7	6		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		181.0	

Video Index Start 1:20:00

Video Index Finish 1:25:26

Feet	Code	Observation	Clock	J/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 7				
4.0	SC	Service Connection	9			
34.0	SC	Service Connection	2			
80.0	SC	Service Connection	3			
99.0	SC	Service Connection	9			
181.0	MH	Center of Manhole 6				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	292
Municipality	EPPING N.H.				Technician	F.B.
Line Location	MILL ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
D	1	1.1		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		80.0	

Video Index Start 0

Video Index Finish 0:06:31

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 1				
5.0	BISC	Break - In Service Connection	2			
72.0	SAGB	Sag In Line Begins				
74.0	SAGE	Sag measuring 2" ends				
80.0	MH	Center of Manhole 1.1				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066	Log Date	5/28/96
Client Name	SVERDRUP CIVIL ,INC.	Video Tape No.	294
Municipality	EPPING N.H.	Technician	F.B.
Line Location	LAGOON ROAD		
Sub System	From MH	To MH	Measured Flow (GPM)
E	3	2	
			Camera Viewing Angle
			DOWNSTREAM
Pipe Diameter	Pipe Type	Joint Spacing	Surface
12	ACP	13	ASP
			Average Depth
			Total Length
			325.0

Video Index Start 1:15:06

Video Index Finish 1:20:55

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 3				
322.0	LJ	Leaking Joint	9-10	1.00		PIPE CONNECTION
325.0	MH	Center of Manhole 2				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	LAGOON ROAD					
Sub System	From MH	To MH	Measured Flow (GPM)		Camera Viewing Angle	
E	4	3			DOWNSTREAM	
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		223.0	

Video Index Start 1:10:42

Video Index Finish 1:15:05

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 4				
2.0	LJ	Leaking Joint	2-3	0.25		PIPE CONNECTION LEAK
221.0	LJ	Leaking Joint	8	0.50		PIPE CONNECTION LEAK
223.0	MH	Center of Manhole 3				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	LAGOON ROAD					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	5	4		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		250.0	

Video Index Start 1:06:51

Video Index Finish 1:10:41

Feet	Code	Observation	Clock	1/1 Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 5				
248.0	LJ	Leaking Joint	3-4	1.00		PIPE CONNECTION LEAK
250.0	MH	Center of Manhole 4				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	LAGOON ROAD					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	6	5		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		248.0	

Video Index Start 0:58:12

Video Index Finish 1:06:50

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 6				
2.0	LJ	Leaking Joint	11&2	0.50		PIPE CONNECTION LEAK
37.0	RSC	Running Service Connection	2		0.25	
117.0	HOLE	Hole In Pipe	11	0.13		
118.0	BISCP	Break - In SC - Protruding 3"	11		0.25	
245.0	LJ	Leaking Joint	9	1.00		PIPE CONNECTION LEAK
248.0	MH	Center of Manhole 5				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	LAGOON ROAD					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	10	7		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		60.0	

Video Index Start 0:55:59

Video Index Finish 0:57:23

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 10				
59.9	RC	Record Comment				NO DEFECTS OBSERVED
60.0	MH	Center of Manhole 7				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	CALEF HIGHWAY					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	11	10		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		165.0	

Video Index Start 0:51:46

Video Index Finish 0:55:58

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 11				
2.0	LJ	Leaking Joint	10&4	2.50		PIPE CONNECTION LEAK
165.0	MH	Center of Manhole 10				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ELM STREET					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	14.1	13		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		36.0	

Video Index Start 0:42:38

Video Index Finish 0:43:34

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 14.1				
35.9	RC	Record Comment				NO DEFECTS OBSERVED
36.0	MH	Center of Manhole 13				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ELM COURT					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	16	15		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		304.0	
Video Index Start			0:35:11	Video Index Finish		0:43:53

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 16				
43.0	SC	Service Connection	9			
99.0	BISC	Break - In Service Connection	2			
99.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
152.0	SC	Service Connection	9			
221.0	SC	Service Connection	2			
224.0	SC	Service Connection	9			
304.0	MH	Center of Manhole 15				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/23/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	292
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ELM ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	22	18		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8	ACP	13	ASP		156.0	

Video Index Start 0:06:32

Video Index Finish 0:14:35

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole 22				
54.0	RSC	Running Service Connection	9		3.00	
83.0	SC	Service Connection	9			
156.0	MH	Center of Manhole 18				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No.	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	HIGH ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	19	18		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		307.0	

Video Index Start 0:22:20

Video Index Finish 0:29:44

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole, 19				
13.0	SC	Service Connection	3			
53.0	SC	Service Connection	3			
181.0	BISC	Break - In Service Connection	9			
181.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
207.0	MD	Mineral Deposits				AT JOINT
224.0	SC	Service Connection	3			
285.0	SAGB	Sag In Line Begins				
306.0	SAGE	Sag measuring 2" ends				
307.0	MH	Center of Manhole 18				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL, INC.				Video Tape No.	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	HIGH ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	20	19		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		355.0	

Video Index Start 0:11:37

Video Index Finish 0:22:19

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole, 20				
93.0	SC	Service Connection	9			
106.0	SC	Service Connection	3			
132.0	SC	Service Connection	3			
179.0	HOLE	Hole In Pipe	2			1"
179.1	RCF	Record Comment (with footage)				MD AT HOLE IN PIPE
225.0	SC	Service Connection	9			
248.0	SC	Service Connection	3			
297.0	SC	Service Connection	3			
327.0	SC	Service Connection	9			
355.0	MH	Center of Manhole 19				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/24/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No	293
Municipality	EPPING N.H.				Technician	F.B.
Line Location	HIGH ST.					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	21	20		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
8"	ACP	13	ASP		344.0	

Video Index Start

Video Index Finish

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole, 21				
4.0	SC	Service Connection	9			
18.0	MD	Mineral Deposits				AT JOINT
33.0	RSC	Running Service Connection	3			IN SERVICE
104.0	SC	Service Connection	3			
173.0	SC	Service Connection	3			
189.0	SC	Service Connection	9			
244.0	SC	Service Connection	3			
301.0	BISC	Break - In Service Connection	9			
301.1	RCF	Record Comment (with footage)				MD IN BREAK-IN SERVICE
336.0	SC	Service Connection	3			
339.0	SC	Service Connection	9			
344.0	MH	Center of Manhole 20				

Utility Pipeline Services, Inc. TVLog System

Job Code	95066		Log Date	5/28/96		
Client Name	SVERDRUP CIVIL ,INC.				Video Tape No	294
Municipality	EPPING N.H.				Technician	F.B.
Line Location	ELM STREET					
Sub System	From MH	To MH	Measured Flow (GPM)	Camera Viewing Angle		
E	14	14.1		DOWNSTREAM		
Pipe Diameter	Pipe Type	Joint Spacing	Surface	Average Depth	Total Length	
12	ACP	13	ASP		367.0	

Video Index Start 032:24:12

Video Index Finish 0:42:37

Feet	Code	Observation	Clock	I/I Flow	Svc Flow	Comments
0.0	MH	Center of Manhole, 14				
69.0	SC	Service Connection	9			
215.0	SC	Service Connection	10			
320.0	SC	Service Connection	9			
362.0	SC	Service Connection	3			
367.0	MH	Center of Manhole 14.1				